NEW ZEALAND OFFICIAL YEAR-BOOK.

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THE

NEW ZEALAND

OFFICIAL YEAR-BOOK,

1920.

TWENTY-NINTH YEAR OF ISSUE.

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PREPARED UNDER THE INSTRUCTIONS OF

THE GOVERNMENT OF NEW ZEALAND.

MALCOLM FRASER, Government Statistician.

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PREFACE.

WITH this the twenty-ninth number of the Year-book it had been hoped to mark a return to the pre-war standard of early publication. That this hope was not realized was attributable firstly to the drastic reduction in size necessitated by the prevailing paper-shortage, and, secondly, to the late availability of much of the material included in the volume, this latter in itself being largely an indirect result of the paper-shortage also.

This number is the smallest ever issued under the title of "New Zealand Official Year-book," and limitations of space have precluded the introduction of new features to any great extent. It was found a difficult task in the time available to retain with some degree of coherency all features of outstanding interest. In all cases the matter presented is of necessity treated with the utmost brevity, and other portions have had to be entirely omitted.

For more recent statistics than are contained herein the reader is referred to the "Monthly Abstract of Statistics" issued from this Office, while in many instances more detailed particulars can be obtained from the annual volumes of "Statistics of New Zealand."

MALCOLM FRASER,
Government Statistician.

Census and Statistics Office,
Wellington, N.Z., 25th February, 1921.

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THE NEW ZEALAND OFFICIAL YEAR-BOOK, 1920.

SECTION I.—POPULATION.

Population of the Dominion.

The estimated population of the Dominion on 31st December, 1919, was 1,164,405 persons. This total does not include Maoris nor residents of the Cook and other Pacific islands annexed in 1901. The Maori population at the census of 1916 was 49,776, that of the annexed islands, 12,797.

	Males.	Females.	Total.
Estimated population at end of 1918* ..	542,046	566,327	1,108,373
Increase during 1919—			
By excess of births over deaths	6,380	7,295	13,675
By excess of immigration over emigration †	40,462	1,895	42,357
Estimated population at end of 1919* ..	588,888	575,517	1,164,405
Maori population, census 1916	25,933	23,843	49,776
Population of Cook and other Pacific islands, census 1916	6,552	6,245	12,797
Total estimated population of the Dominion on 31st December, 1919	621,373	605,605	1,226,978

* Excluding Maoris and residents of Cook and other Pacific Islands. † Including members of Expeditionary Forces.

The population, exclusive of Maoris and residents of the annexed islands, at each census since 1874 is given in the following statement, together with the numerical and centesimal increase between the successive enumerations:—

Date of Enumeration.	Population.	Numerical Increase.	Centesimal Increase.
March, 1874	299,514		
1878	414,412	114,898	38·36
April, 1881	489,933	75,521	18·22
March, 1886	578,482	88,549	18·07
April, 1891	626,658	48,176	8·33
1896	703,360	76,702	12·24
March, 1901	772,719	69,359	9·86
1906	888,578	115,859	14·99
April, 1911	1,008,468	119,890	13·49
October, 1916	1,099,449	90,981	9·02

The Cook Islands are not included in any of the statistics of New Zealand quoted throughout this book. Figures *re* Maoris are included in the general details in a few cases only—*i.e.*, imports and exports, savings-bank deposits, &c. Where Maoris are included they swell totals to a much less extent per head than does the European population. The figures given below, therefore, do not include Maoris and residents of Cook Islands.

Year.	Estimated Population at End of Year.			Increase during Year.		Mean Population for Year.
	Males.	Females.	Totals.	Numerical.	Per Cent.	
1910 ..	529,998	474,388	1,004,386	21,460	2·18	992,802
1911 ..	539,729	485,677	1,025,406	21,020	2·09	1,014,896
1912 ..	553,212	499,415	1,052,627	27,221	2·65	1,039,016
1913 ..	569,109	515,553	1,084,662	32,035	3·04	1,068 644
1914 ..	568,161	527,833	1,095,994	11,332	1·04	1,090,328
1915 ..	563,963	538,831	1,102,794	6,800	0·62	1,099,394
1916 ..	549,895	550,668	1,100,563	−2,231*	−0·20*	1,099,449†
1917 ..	537,360	560,312	1,097,672	−2,891*	−0·26*	1,099,117
1918 ..	542,046	566,327	1,108,373	10,701	0·97	1,103,022
1919 ..	588,888	575,517	1,164,405	56,032	5·06	1,136,389

* Decrease. † Census population.

The departure of the Expeditionary Force and Reinforcements effected a heavy drain upon the small margin of numerical superiority of males. By the end of 1916 there were more females than males in New Zealand, and this position was maintained until July, 1919, when the male preponderance was again established.

At 30th June, 1914, there were 52,175 more males than females; at 30th June, 1920, only 15,404. (Maoris have not been included.)

Should the pre-war trend of events be continued, the male surplus would permanently disappear in a few years' time.

Natural Increase.

The average rate of natural increase for the ten years preceding 1919 was 15·88 per 1,000. It may be remarked that the rates for 1918 and 1919 are much the lowest on record. Further discussion of natural increase will be found in the Vital Statistics section of this book.

Year.	Excess of Births over Deaths.			Natural Increase per 1,000 of Mean Population.
	Males.	Females.	Total.	
1910 ..	7,838	8,507	16,345	16·46
1911 ..	7,937	8,883	16,820	16·58
1912 ..	8,622	9,672	18,294	17·61
1913 ..	8,566	9,250	17,816	16·67
1914 ..	8,549	9,641	18,190	16·68
1915 ..	8,649	9,236	17,885	16·27
1916 ..	8,523	9,390	17,913	16·29
1917 ..	8,298	9,413	17,711	16·11
1918 ..	3,391	6,105	9,496	8·61
1919 ..	6,380	7,295	13,675	12·03

External Migration.

The total number of arrivals and departures during the past ten years, distinguishing the sexes and the number of those under and over twelve years of age, is given in the table following. The figures for the last five years do not include members of Expeditionary Forces.

Arrivals and Departures, 1910–19.

Year.	Over 12 Years of Age.		Under 12 Years of Age.		Total.
	Males.	Females.	Males.	Females.	
ARRIVALS.					
1910	20,161	11,832	1,974	1,802	35,769
1911	22,881	13,953	2,452	2,103	41,389
1912	24,026	15,442	2,749	2,443	44,660
1913	22,872	15,801	3,019	2,896	44,588
1914	20,360	13,020	2,166	2,100	37,646
1915	12,993	9,589	1,494	1,475	25,551
1916	10,657	8,406	1,302	1,434	21,799
1917	8,334	5,583	825	907	15,649
1918	5,685	4,842	671	708	11,906
1919	9,341	8,822	1,431	1,337	20,931
DEPARTURES.					
1910	19,032	10,629	1,419	1,281	32,361
1911	21,730	12,190	1,809	1,460	37,189
1912	20,151	12,278	1,763	1,541	35,733
1913	17,188	10,518	1,372	1,291	30,369
1914	18,460	11,227	1,565	1,254	32,506
1915	12,228	8,251	1,090	907	22,476
1916	10,717	8,273	1,215	958	21,163
1917	6,896	5,672	701	600	13,869
1918	5,477	5,029	620	534	11,660
1919	10,086	7,440	1,291	1,060	19,877

The monthly figures for 1919 are as follows:—

Month.	Arrivals.	Departures.	Excess of Arrivals.	Excess of Departures.
January	1,139	706	433	..
February	1,394	833	561	..
March	1,545	1,761	..	216
April	1,112	1,743	..	631
May	1,514	2,018	..	504
June	270	1,992	..	1,722
July	1,765	995	770	..
August	886	1,285	..	399
September ..	2,444	1,845	599	..
October	2,662	1,943	719	..
November ..	2,735	2,314	421	..
December	3,465	2,442	1,023	..
Totals ..	20,931	19,877	1,054	..

Some two-thirds of the oversea arrivals come from Australia, while five-sixths of the departures are booked for the Commonwealth. The numbers of departures for Australian ports are, however, inflated by the inclusion of many persons who sail from New Zealand for Australia to make that country a starting-point for further travel, and who may or may not return by the same route. The real destination and original place of departure when returning are not ascertained in these cases.

ARRIVALS FROM AND DEPARTURES TO VARIOUS COUNTRIES, 1910–19.

Year.	Arrivals. From					
	United Kingdom.	Australian Commonwealth.	Fiji.	Other British Possessions.	Foreign Countries.	Total Arrivals.
1910 ..	9,367	24,502	581	351	968	35,769
1911 ..	11,379	26,909	624	996	1,481	41,389
1912 ..	12,912	28,522	767	1,305	1,154	44,660
1913 ..	14,707	26,764	548	1,420	1,149	44,588
1914 ..	8,579	25,967	648	1,267	1,185	37,646
1915 ..	3,531	19,499	655	862	1,004	25,551
1916 ..	3,394	15,321	697	626	1,761	21,799
1917 ..	2,931	10,146	617	935	1,020	15,649
1918 ..	1,176	8,282	574	1,130	744	11,906
1919 ..	4,668	11,568	882	2,412	1,401	20,931

Year.	Departures. To					
	United Kingdom.	Australian Commonwealth.	Fiji.	Other British Possessions.	Foreign Countries.	Total Departures.
1910 ..	2,509	27,100	702	694	1,356	32,361
1911 ..	2,755	30,918	696	844	1,976	37,189
1912 ..	2,605	30,141	580	846	1,561	35,733
1913 ..	2,649	24,961	479	1,017	1,263	30,369
1914 ..	2,574	26,693	939	871	1,429	32,506
1915 ..	2,063	17,793	659	821	1,140	22,476
1916 ..	2,608	16,390	420	712	1,033	21,163
1917 ..	1,501	10,499	503	588	778	13,869
1918 ..	445	9,477	434	615	689	11,660
1919 ..	3,559	12,722	675	1,546	1,375	19,877

PERMITS AND PASSPORTS.

PERMITS TO LEAVE NEW ZEALAND.

The War Regulations of the 15th November, 1915, as amended from time to time, prescribe that no person over the age of fifteen years shall leave New Zealand for any place beyond the seas save in pursuance of a written permit issued to him by the Minister or Under-Secretary of Internal Affairs, or some other authorized person.

The only persons exempted from the necessity for obtaining permits are those who—

(*a.*) Leave New Zealand on the King's Service:
(*b.*) Leave New Zealand as *bona fide* members of the crew of any ship:
(*c.*) Arrive in and leave New Zealand in the course of the same voyage of any ship other than a ship arriving from a port in the Commonwealth of Australia.

Passports.

The amendments made in November, 1915, to the Defence of the Realm Regulations of the Imperial Government, providing that no person shall enter or leave the United Kingdom without a passport, have led to a greatly increased number being issued in New Zealand.

A person leaving New Zealand for the United Kingdom or other country (with the exception of British possessions in the Pacific, for which permits suffice) must therefore have in his possession (1) a permit under the War Regulations to enable him to depart from the Dominion, (2) a passport to enable him to land at the end of his journey. If foreign countries are being visited the passport must be *viséd* by the Consular representative of such country in New Zealand.

Between the 1st November, 1915, and the 31st March, 1918, passports were issued to the number of 3,112, for the year ended 31st March, 1919, 1,346, and for the year ended 31st March, 1920, 4,620.

Permission to enter New Zealand.

Under the War Regulations of the 21st August, 1916, no person over the age of fifteen years may land in New Zealand unless in possession of a passport or some other document satisfactorily establishing his or her nationality or identity.

In the case of a person coming from a foreign country the passport must have been issued or *viséd* by the British Ambassador or a British Consul in that country, and in the case of a person coming from any part of the British dominions the issue or *visé* must have been by some public official duly authorized in that behalf.

Certain exceptions are made with respect to persons coming to New Zealand from Australia, the Cook Islands, and Samoa. In their case the only requirement is the possession of a permit. The regulations further do not apply to a British subject arriving in New Zealand as the master or a member of the crew of the vessel in which he arrives.

The Minister of Internal Affairs or any person authorized by him is given power to grant exemptions from the requirements of the regulation.

Assisted Immigration.

Residents in the Dominion may, by application on the proper form, secure a passage at assisted rates for any person residing in the United Kingdom.

The payments required are—second class, £52; third class (two-berth cabin), £30; third class (four-berth cabin), £26. The passage-money, which must be paid in full before passages are booked, can be paid to the Immigration

Department in Wellington or to the High Commissioner for New Zealand in London. The Department will cable any nomination, together with a remittance, if so desired, for the extra charge of £1.

Domestic servants and farm labourers granted assisted passages as such are required to follow in New Zealand their respective occupations of domestic and farm work for a period of one year after their arrival in the Dominion. If it is found that some occupation other than domestic or farm work is entered into by any such assisted immigrant before the expiration of one year after arrival in New Zealand, the immigrant will be called upon to pay the Government the difference between the assisted rate and the full fare.

Children between three and twelve years of age travelling with their parents are charged half rates. One child under three years of age in each family is taken free. A quarter-fare is charged for each additional child under three years of age.

Passages are granted on vessels belonging to the Shaw, Savill, and Albion Company, the New Zealand Shipping Company, and the Federal Steam Navigation Company.

Unhealthy persons should not be nominated, as passages at reduced rates will not be granted to them. When cases of lung, chest, or other like complaints are discovered in any member of a family by the Medical Officer at London or Liverpool, the whole family will be prevented from sailing.

The foregoing applies to persons of not more than fifty years of age in the case of nominated persons and farmers or farm labourers, and not more than forty years of age in the case of domestic servants.

In the case of immigrants under twenty-one years of age, special arrangements have to be entered into for their protection on the voyage where deemed necessary or advisable.

The High Commissioner is authorized to grant to suitable and healthy farmers, farm labourers, and domestic servants, who apply to him in London, a passage to New Zealand at the following rates :—

	Farmers.	Farm Labourers.	Domestic Servants.
	£ s. d.	£ s. d.	
Third class : 6-berth cabin ..	24 0 0	10 0 0	Free.
,, 4-berth cabin ..	26 0 0	12 0 0	Grant £2.
,, 2-berth cabin ..	30 0 0	16 0 0	—

The following table illustrates the progress of the last decade :—

Year ended 31st March.	Immigrants assisted.	Capital possessed by Assisted Immigrants.	Net Government Expenditure on Immigration.
		£	£
1911	2,624	37,735	9,441
1912	3,300	24,088	11,681
1913	3,928	32,006	14,694
1914	5,064	39,701	33,914
1915	2,986	16,313	33,220
1916	1,103	2,564	10,010
1917	638	1,407	6,533
1918	171	*	3,877
1919	906	*	8,000
1920	3,811	*	40,516

* Not available.

Reception of and dealing with Assisted Immigrants.

On arrival in New Zealand the immigrants are met on board by officers of the Immigration Department who accompany the Port Health Officer to the ship. While the ship is in the stream it is the special duty of such officers to afford to the assisted immigrants all necessary information as regards transhipment, &c. Arrangements are made for safety and transhipment of luggage.

Each immigrant is seen as he passes towards the doctor for examination, and is handed an official letter containing information as to where his ticket will be arranged for, and the place and time of departure of his connecting train or boat (if any). The immigrant is also requested to see the Immigration Officer on board, or to come to the office, which is near the wharf in Wellington (Union Steamship Company's building), if he requires information or advice beyond what is given in the letter. The addresses of the district agencies of the Labour Department in the larger centres of the Dominion are also supplied to male assisted immigrants. It is the practice of the Department to send out advices, by wire if necessary, to friends and relatives of immigrants about to arrive, and to get back information as to where the newcomers will be met. These messages, often together with private letters, &c., are given out on board to those to whom they are addressed. Information of this nature is much appreciated, especially by wives joining their husbands.

Assisted immigrants requiring work are referred to the office of the Immigration Department, and their cases are there dealt with.

As regards the female assisted domestic workers, who are chosen after application at Home to the High Commissioner, and who are sent to New Zealand under the supervision of one or more responsible matrons, the following applies:—

The Government advertises the fact that the books of the Department are open to record the names of those people in the Dominion desirous of securing the services of an assisted girl. Such advertisements bring into the office many applications, especially pending the arrival of the ship.

Each matron in charge on board is instructed to classify the girls under two heads: (*a*) those with work already arranged or friends to go to; (*b*) those without either friends or work. On arrival they are met by the Girls' Superintendent of the Immigration Department. Arrangements are made for sending to their destinations those girls who are going to friends or to definite positions. Those requiring accommodation are directed to homes or hostels approved by the Minister of Immigration for this purpose. The Superintendent then separately considers the case of each girl, and arranges to place her with an applicant for a Government assisted girl. In placing these girls at present, considerable reliance has necessarily to be placed on the statements made by them. The Department is, however, taking steps to get full and independent details of the work that the girl was actually engaged in before she left the Mother-country. After a girl has been placed, the Department endeavours to keep in touch with her by correspondence.

Immigration Restriction.

The legislation respecting the restriction of immigration into New Zealand is contained in the Immigration Restriction Act, 1908, and its amendments, and the Undesirable Immigrants Exclusion Act, 1919.

Prohibited Immigrants.

The following persons or classes of persons are prohibited from landing in New Zealand:—

(1.) Persons not of British birth and parentage who are unable to write out and sign in any European language a prescribed form of application;
(2.) Idiots or insane persons;
(3.) Persons suffering from contagious diseases which are loathsome or dangerous;
(4.) Persons arriving in New Zealand within two years after the termination of a period of imprisonment for a serious offence.

The above provisions do not apply to (*a*) His Majesty's land and sea forces, (*b*) the officers and crew of any ship of war of any Government, (*c*) persons duly accredited to the Government of New Zealand by the Imperial or any other Government, (*d*) shipwrecked persons, (*e*) the officers and crew of any mercantile vessel who leave New Zealand with that vessel, (*f*) persons exempted by the Governor-General in Council or by the Minister of Internal Affairs.

(5.) Chinese (not naturalized in New Zealand), unless they pay a poll-tax of £100 and are able to read a printed passage of not less than 100 words of the English language selected by the Collector of Customs.

The officers and crews of any ship of war of the Chinese Government, and members of the crew of any mercantile vessel who leave New Zealand by that vessel, are exempted from these provisions. There is power to exempt any other persons or classes of persons under such conditions as the Minister of Customs may prescribe.

(6.) Persons who have at any time been subjects of the State of Germany or of Austria-Hungary as those States existed on the 4th August, 1914, except under a license issued by the Attorney-General.
(7.) Persons not permanently resident in New Zealand who are disaffected or disloyal and of such a character that their presence in New Zealand would be injurious to the peace, order, and good government of the Dominion, and whom the Attorney-General on that account prohibits from landing.

Restricted Immigrants.

When persons arrive in New Zealand who are lunatic, idiotic, deaf, dumb, blind, or infirm, and are likely to become a charge upon the public or upon any public or charitable institution, the master, owner, or charterer of the ship by which such persons come to New Zealand must enter into a bond for £100 for each such person, guaranteeing his support and maintenance for five years.

His Majesty's land and sea forces, persons brought to New Zealand either wholly or partly at the expense of the Government, shipwrecked mariners brought to New Zealand by another vessel without charge, and persons domiciled in New Zealand are exempted from these provisions. General power is given to exempt other persons in special cases and under such conditions as the Minister of Customs may prescribe.

General.

Every person of and over the age of fifteen years who lands in New Zealand must, unless exempted by the Attorney-General, make and deliver to an officer of Customs a declaration giving his or her name, occupation, and residence, and also the following particulars if the immigrant is not a permanent resident in New Zealand returning thereto after not more than twelve months' absence: Country of birth; age; names and places of birth of his parents; particulars as to his nationality, his intention as to permanent residence in or departure from New Zealand, and his purpose in coming thereto.

Race Aliens.

Persons of other than European descent are classified in the immigration returns as "race aliens." Immigrants of this class have since 1908 been required to pass an education test before admission to the Dominion.

Birthplace.	Year.									
	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
British Possessions—										
India	80	190	325	133	257	13	92	92	138	193
Pacific islands	9	24	51	48	8	10	28	44	278	25
Other	43	1	4	34	7	8	..	..	1	5
Total, British possessions	132	215	380	215	272	31	120	136	417	223
Foreign Countries—										
China	209	546	348	325	511	265	327	272	256	418
Syria	12	9	20	19	9	3	1	2	1	..
Asia Minor	4	4	8	2	..	..	2	..	2	..
Japan	1	4	9	17	13	13	26	11	30	10
Pacific islands	7	25	24	4	6	6	537	295	211	57
Other	2	1	14	7	12	4	..	8	..	..
Total, foreign countries	235	589	423	374	551	291	893	588	500	485
Total, "race aliens" ..	367	804	803	589	823	322	1,013	724	917	708

Of the race aliens arriving in New Zealand a large proportion are Chinese, some of whom, however, have been formerly resident in the Dominion. Hindus and other natives of India are also of late years arriving in considerable numbers. A number of soldiers from the French Pacific islands are included in the figures for 1916, 1917, and 1918.

Since July, 1914, records of departures of race aliens have been kept, and these show that a total of 321 race aliens left the Dominion during 1919, including natives of the following countries: China, 237; India, 18; Japan, 4; British Pacific islands, 36; foreign Pacific islands, 22.

The census returns of 1916 showed that there were 3,204 race aliens resident in the Dominion, not including 3,221 Maori half-castes living as Europeans. Of these, 2,857 were described as being of full-blood and 347 as of half-blood.

More than 45 per cent. of the race aliens reside in Auckland Province. Wellington, however, claims the largest share (over one-third) of the Chinese.

The Chinese.

At the census of 1881, the year in which taxation was first imposed on Chinese landing in New Zealand, the Chinese population numbered 5,004 persons. In 1896 an Act was passed raising the poll-tax on Chinese immigrants from £10 to £100 per head, and limiting the number of Chinese passengers that may be carried by vessels to New Zealand to one for every 200 tons burthen. According to the census of 1901, the Chinese population was 2,857, in 1906 it was 2,570, in 1911, 2,630, and in 1916 2,147, of whom 135 were half-castes. During recent years departures are about equal to arrivals. For the first nine months of 1920, however, arrivals exceeded departures by the large total of 905.

Naturalization.

When any alien residing in New Zealand desires to be naturalized he may present to the Governor-General a memorial signed and verified by a statutory declaration setting forth—

His name, age, birthplace, residence, and occupation;

The length of his residence in New Zealand, and his desire to settle therein;

A request that letters of naturalization may be granted to him.

Every memorial must have written upon it or attached to it a certificate signed by some Magistrate or Justice to the effect that the applicant is known to the person certifying and is of good repute. On taking the oath of allegiance he shall enjoy within New Zealand all the rights and capacities that a natural-born subject of the United Kingdom can enjoy or transmit, excepting such rights (if any) as are specially excepted in the letters of naturalization granted to him.

Any person who has been previously naturalized in the United Kingdom or any British possession may obtain letters of naturalization in New Zealand upon presentation of his certificate or letters to the Governor-General, with satisfactory evidence of his *bona fides*.

An alien woman married to a natural-born or naturalized British subject shall be deemed to be herself naturalized. Where the father (or the mother, being a widow) has become naturalized in New Zealand, every child of such father or mother who during minority resides with such parent shall also be deemed to be naturalized.

No fee is payable for naturalization except in the case of Chinese, who are charged £1.

The issue of letters of naturalization, which was suspended during the war, was resumed during November, 1919, in regard to aliens from countries which, in the recent war, were either neutral or allied with Great Britain.

The Revocation of Naturalization Act of 1917 provided that the Governor-General may, by Order in Council, revoke the naturalization of any person when such revocation is considered desirable on grounds of public policy.

The number of natives of each country naturalized during the twenty years 1895–1914 is shown in the next table.

Natives of—	Persons.	Natives of—	Persons.
Austria-Hungary	1,529	United States of America ..	144
Germany	1,159	Netherlands	61
Denmark	676	Greece	61
Sweden	671	Portugal and possessions ..	60
Norway	455	Belgium	40
Russia	346	Spain	16
Italy	231	Japan	11
Switzerland	186	Turkey	11
France	159	Other countries	52
Syria	147		
China	146	Total	6,161

Registration of Aliens.

The Registration of Aliens Act passed in 1917 provided for the registration of all persons of the age of fifteen or over who are not British subjects either by birth or by naturalization in New Zealand. The Government Statistician is charged with the duty of compiling and keeping the register, but the actual registration is effected by Registration Officers (mostly police officers) throughout the Dominion. Every alien not less than fifteen years of age is required to make application for registration to a Registration Officer, and is required to supply the following particulars concerning himself or herself:—

(*a.*) Name in full:
(*b.*) Nationality (and if nationality is not the nationality of origin, nationality of origin):
(*c.*) Place of birth:
(*d.*) Age, and date of birth:
(*e.*) Whether married, single, widower, widow, or divorced:
(*f.*) If married, the name, age, nationality of origin, and place of abode of wife or husband:
(*g.*) If married, a widower, a widow, or divorced, number, names, and ages of children (if any):
(*h.*) Occupation:
(*i.*) Date of arrival in New Zealand:
(*j.*) Place of abode and postal address:
(*k.*) Whether permanently resident in New Zealand:
(*l.*) If not permanently resident in New Zealand, place of permanent residence, and date of projected departure from New Zealand:
(*m.*) Such other particulars as may from time to time be prescribed by regulations under the Act.

Upon receipt of an application for registration the Registration Officer issues a certificate of registration, and forwards the application in duplicate to the Superintendent of Police for the district, who files one copy and sends the other on to the Commissioner of Police for transmission to the Government Statistician. Registered aliens are required to notify change of address on pain of a penalty not exceeding £20. Failure to register involves a fine on conviction not exceeding £50.

The number of aliens on the Dominion register in April, 1920, was 8,581. The birthplaces of these are as follows:—

Birthplace.	Males.	Females.	Total.	Birthplace.	Males.	Females.	Total.
France	89	46	135	Austria-Hungary	72	6	78
Spain	17	4	21	Balkan States ..	1,080	34	1,114
Portugal ..	14	1	15	Palestine and Syria	85	39	124
Italy	177	23	200	China	2,349	27	2,376
Switzerland ..	178	64	242	Japan	9	..	9
Belgium ..	48	19	67	U.S. America ..	430	115	545
Netherlands ..	66	2	68	South Sea islands	69	28	97
Germany ..	587	167	754	Other countries ..	474	38	512
Schleswig-Holstein	18	4	22	At sea	9	4	13
Denmark ..	452	92	544	British-born, but aliens by naturalization, marriage, &c.	50	607	657
Norway ..	359	26	385				
Sweden ..	165	8	173				
Poland ..	112	34	146				
Late Russian Empire	227	57	284	Totals ..	7,136	1,445	8,581

A table published in Volume iv of "Statistics of New Zealand," 1919, gives fairly detailed information as to birthplaces in conjunction with ages. A summary giving information as to ages follows:—

Age-group.	Males.	Females.	Total.	Age-group.	Males.	Females.	Total.
15 and under 20	158	21	179	45 and under 50	615	160	775
20 „ 25	633	100	733	50 „ 55	551	129	680
25 „ 30	994	174	1,168	55 „ 60	468	118	586
30 „ 35	990	183	1,173	60 and over ..	1,109	219	1,328
35 „ 40	867	168	1,035				
40 „ 45	751	173	924	Totals ..	7,136	1,445	8,581

Density of Population.

The number of persons (excluding Maoris) to a square mile in each provincial district at the last eight censuses is as follows:—

Provincial District.	Area in Square Miles.	Persons to a Square Mile.							
		1881.	1886.	1891.	1896.	1901.	1906.	1911.	1916.
Auckland	25,364	3·92	5·14	5·25	6·05	6·94	8·33	10·43	12·17
Taranaki	3,732	3·98	4·82	5·91	8·35	10·14	11·63	13·82	14·99
Hawke's Bay ..	4,241	4·10	5·79	6·72	8·03	8·35	9·96	11·45	12·80
Wellington	10,807	5·63	7·17	9·04	11·28	13·08	16·64	18·42	21·48
Marlborough ..	4,225	2·20	2·63	3·02	2·95	3·15	3·40	3·78	3·93
Nelson	10,875	2·40	2·78	3·20	3·29	3·49	3·91	4·46	3·98
Westland	4,881	3·08	3·26	3·25	2·96	2·97	3·01	3·22	3·18
Canterbury	13,858	8·11	8·77	9·28	9·82	10·34	11·50	12·52	13·12
Otago—									
Otago portion ..	13,957	7·70	8·15	8·32	8·60	8·98	9·16	9·52	9·42
Southland portion ..	11,358	2·34	3·12	3·26	3·87	4·21	4·67	5·17	5·25
Totals ..	103,298	4·74	5·60	6·07	6·81	7·48	8·60	9·76	10·64

Population in Principal Divisions.

North and South Islands.

The principal natural divisions in New Zealand are the North, South, and Stewart Islands. These contain approximately the whole population of European descent, the Cook and other annexed islands being inhabited almost solely by coloured Natives.

The population of the two Islands at successive censuses is given in the table following, together with the percentage that each Island bears to the total:—

Population of the North and South Islands, 1858–1916.

Census Year.	Population (excluding Maoris).			Proportions per Cent.	
	North Island.	South Island.*	Total.	North Island.	South Island.*
1858	34,094	25,319	59,413	57·38	42·62
1861	41,641	57,380	99,021	42·05	57·95
1864	65,263	106,895	172,158	37·91	62·09
1867	79,913	138,755	218,668	36·55	63·45
1871	96,875	159,518	256,393	37·78	62·22
1874	111,934	187,580	299,514	37·37	62·63
1878	158,208	256,204	414,412	38·18	61·82
1881	193,047	296,886	489,933	39·40	60·60
1886	250,482	328,000	578,482	43·30	56·70
1891	281,474	345,184	626,658	44·92	55·08
1896	340,638	362,722	703,360	48·43	51·57
1901	390,579	382,140	772,719	50·54	49·45
1906	476,737	411,841	888,578	53·65	46·35
1911	563,733	444,735	1,008,468	55·90	44·10
1916	651,072	448,377	1,099,449	59·22	40·78

* Including Stewart Island and Chatham Islands.

The figures for 1916 are not quite fair to the South Island. All the military and internment camps were in the North Island, and many of the soldiers, &c., in these on census night belonged to the South Island. The presence of the camps in the North Island had the further effect of temporarily attracting people from the other Island for business purposes, or to be near soldier friends and relatives. The troops abroad on census night (42,666 in number) may be regarded as having come from the two Islands in proportions approximately relative to population.

Provincial Districts.

The populations of the various provincial districts as estimated at the 31st December, 1919, are as follows:—

Provincial District.	Totals.	Provincial District.	Totals.
Auckland	333,424	Canterbury	191,282
Taranaki	58,301	Otago—	
Hawke's Bay	60,246	Otago portion	137,995
Wellington	239,962	Southland portion ..	62,374
Marlborough	16,970		
Nelson	49,050	Totals for the Dominion	1,164,405
Westland	14,801		

Counties.

The counties contain what is understood to be the rural population, but this is not strictly correct, as some of the towns not municipalized and forming part of counties have considerable populations. On the other hand, the population of a few of the smaller boroughs might be classed as rural, as will be noticed further on.

The estimated distribution of population at 31st December, 1919 (exclusive of Maoris), was as follows:—

Counties	484,195
Boroughs	641,100
Independent town districts	35,328
Adjacent islands	697
Persons on shipboard	3,085
Total population of Dominion	1,164,405

A list is given below showing counties and their population (exclusive of interior boroughs and independent town districts) as estimated at the 31st December, 1919, with amendments where necessary on account of subsequent alterations of boundaries. Maoris are not, unless expressly stated to the contrary, included in any population figures quoted in this section.

Population of Counties.

County.	Population.	County.	Population.
Akaroa	2,062	Halswell	1,693
Akitio	1,503	Hauraki Plains	2,168
Amuri	1,895	Hawera	5,080
Ashburton	11,216	Hawke's Bay	10,080
Ashley	757	Heathcote	3,509
Awakino	801	Hobson	5,055
Awatere	1,578	Hokianga	2,915
Bay of Islands	3,838	Horowhenua	5,401
Bruce	4,924	Hutt	5,405
Buller	5,809	Inangahua	4,263
Castlepoint	659	Inglewood	3,234
Chatham Islands	228	Kaikoura	1,948
Cheviot	1,263	Kairanga	4,377
Clifton	2,150	Kaitieke	2,955
Clutha	7,106	Kawhia	1,185
Collingwood	1,293	Kiwitea	2,744
Cook	6,060	Kowai	1,991
Coromandel	2,362	Lake	1,784
Dannevirke	4,831	Levels	4,803
East Taupo	551	Mackenzie	3,033
Eden	14,196	Makara	3,156
Egmont	3,340	Malvern	2,818
Eketahuna	2,454	Manawatu	4,798
Ellesmere	3,629	Maniototo	2,585
Eltham	3,711	Manukau	5,130
Eyre	1,879	Marlborough	7,014
Featherston	3,434	Masterton	3,976
Fiord	18	Matakaoa	474
Franklin	8,795	Matamata	3,633
Geraldine	5,403	Mauriceville	818
Great Barrier	262	Mongonui	3,998
Grey	5 684	Mount Herbert	421

Population of Counties—continued.

County.	Population.	County.	Population.
Murchison	1,343	Vincent	3,945
Ohinemuri	3,523	Waiapu	1,723
Ohura	2,605	Waihemo	1,506
Opotiki	2,011	Waikato	6,918
Oroua	3,507	Waikohu	3,243
Otamatea	3,924	Waikouaiti	4,272
Oxford	1,827	Waimairi	12,394
Pahiatua	3,290	Waimarino	2,783
Paparua	4,905	Waimate	7,164
Patangata	2,192	Waimate West	2,499
Patea	3,396	Waimea	9,633
Peninsula	1,880	Waipa	6,452
Piako	4,264	Waipara	2,133
Pohangina	1,678	Waipawa	3,250
Raglan	4,305	Waipukurau	702
Rangiora	2,857	Wairarapa South	2,912
Rangitikei	9,204	Wairewa	1,078
Rodney	3,630	Wairoa	2,469
Rotorua	1,522	Waitaki	10,077
Selwyn	1,480	Waitemata	7,943
Sounds	1,227	Waitomo	5,539
Southland	25,754	Waitotara	2,636
Springs	1,857	Wallace	8,542
Stewart Island	367	Wanganui	2,540
Stratford	5,562	Weber	443
Taieri	5,801	Westland	4,257
Takaka	1,938	West Taupo	2,514
Taranaki	4,912	Whakatane	2,197
Tauranga	3,616	Whangamomona	1,519
Tawera	881	Whangarei	8,808
Thames	1,764	Whangaroa	852
Tuapeka	5,301	Woodville	1,917
Uawa	876		

The next table shows the distribution of the population in counties and boroughs at each quinquennial census since 1881 :—

Census Year.	Counties.	Boroughs.	Percentage.		
			Counties.	Boroughs.	Shipboard, &c.
1881	291,238	194,981	59·44	39·80	0·76
1886	327,328	245,612	56·58	42·46	0·96
1891	352,097	270,343	56·18	43·14	0·68
1896	391,735	307,294	55·69	43·69	0·62
1901	417,596	350,202	54·04	45·32	0·64
1906	458,797	424,614	51·63	47·79	0·58
1911	496,779	505,598	49·26	50·14	0·60
1916	501,259	585,306	45·59	53·24	1·17

Boroughs.

Prior to the year 1900 there was no statutory limitation to the number of inhabitants necessary to constitute a borough, and consequently many small centres, the residents being mainly engaged in rural

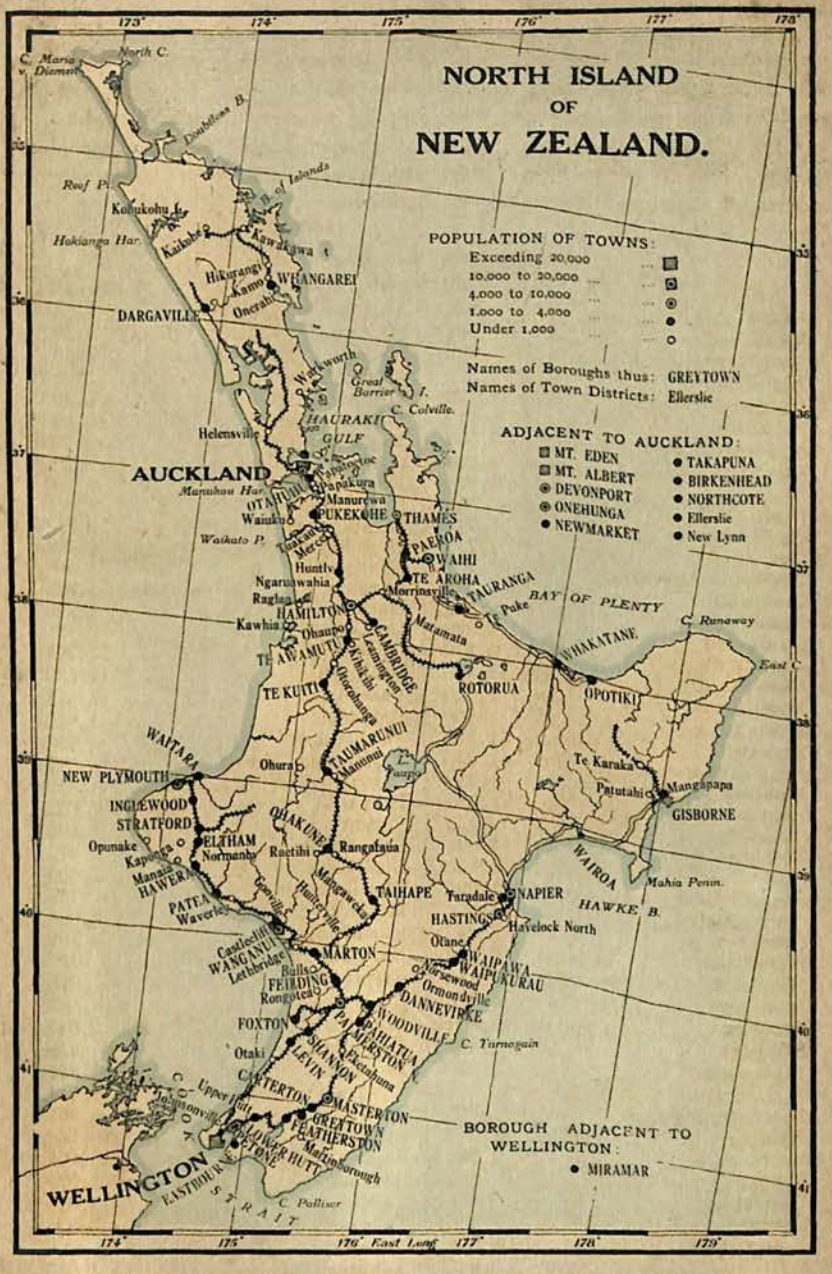
occupations, became municipalities. The Municipal Corporations Act now imposes a limit as to area, and provides that no new borough may be constituted unless the proposed area contains at least 1,000 inhabitants.

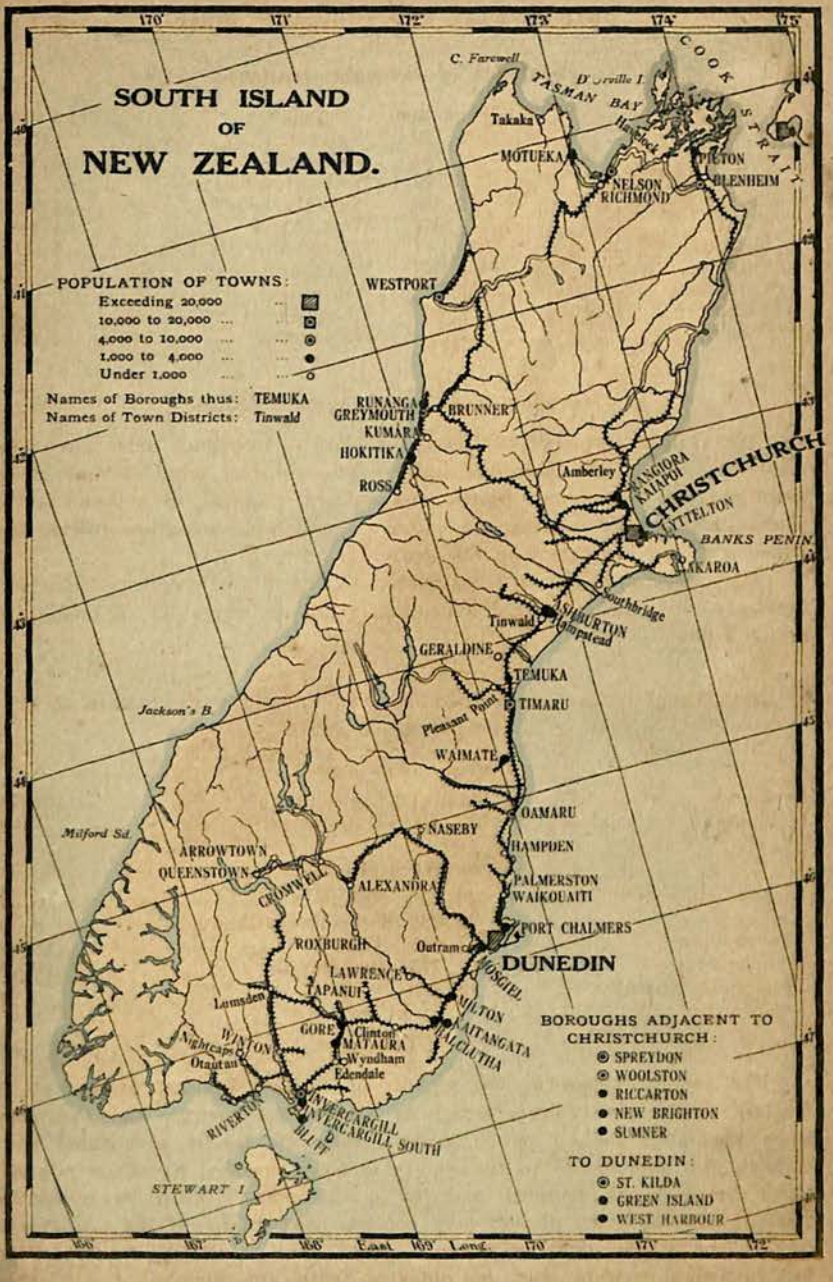
The following table shows the estimated population of boroughs (excluding Maoris) as at 31st December, 1919, with amendments where necessary on account of subsequent alteration of boundaries:—

Population of Boroughs.

Borough.	Population.	Borough.	Population.
Akaroa ..	562	Milton ..	1,531
Alexandra	737	Miramar	2,390
Arrowtown	322	Mosgiel	1,802
Ashburton	3,334	Motueka	1,513
Auckland (City)	73,852	Mount Albert	10,422
Balclutha	1,671	Mount Eden	13,023
Birkenhead	2,262	Napier ..	13,785
Blenheim	4,005	Naseby ..	299
Bluff ..	1,926	Nelson (City)	9,107
Brunner	606	New Brighton	3,003
Cambridge	1,711	Newmarket	3,061
Carterton	1,713	New Plymouth	9,820
Christchurch (City)	61,104	Northcote	1,765
Cromwell	576	Oamaru	5,389
Dannevirke	3,515	Ohakune	1,455
Dargaville	1,899	Onehunga	6,422
Devonport	8,140	Opotiki ..	1,167
Dunedin (City)	57,935	Otahuhu	2,539
Eastbourne	1,310	Paeroa ..	1,471
Eketahuna	850	Pahiatua	1,650
Eltham	1,871	Palmerston	788
Featherston	1,230	Palmerston North	13,617
Feilding	4,949	Patea ..	1,155
Foxton ..	1,831	Petone ..	7,652
Geraldine	929	Picton ..	1,195
Gisborne	11,022	Port Chalmers	2,742
Gore ..	3,735	Pukekohe	1,589
Green Island	1,996	Queenstown	739
Greymouth	4,960	Rangiora	2,081
Greytown	1,259	Riccarton	3,106
Hamilton	8,059	Richmond	942
Hampden	412	Riverton	980
Hastings	8,543	Ross ..	507
Hawera	3,891	Rotorua*	3,042
Hokitika	2,241	Roxburgh	446
Inglewood	1,311	Runanga	1,406
Invercargill	14,867	Shannon	1,044
Invercargill South	1,766	Spreydon	4,961
Kaiapoi	1,627	St. Kilda	5,788
Kaitangata	1,762	Stratford	3,067
Kumara	553	Sumner	2,579
Lawrence	878	Taihape	2,045
Levin ..	1,730	Takapuna	3,895
Lower Hutt	5,093	Tapanui	363
Lyttelton	3,817	Taumarunui	1,955
Marton	1,801	Tauranga	2,302
Masterton	6,256	Te Aroha	1,877
Mataura	1,197	Te Awamutu	1,138

* Town constituted under special Act.


NORTH ISLAND
OF
NEW ZEALAND.
POPULATION OF TOWNS:
Exceeding 20,000
10,000 to 20,000
4,000 to 10,000
1,000 to 4,000
Under 1,000
Names of Boroughs thus: GREYTOWN
Names of Town Districts: Ellerslie
ADJACENT TO AUCKLAND:
MT. EDEN
MT. ALBERT
DEVONPORT
ONEHUNGA
NEWMARKET
TAKAPUNA
BIRKENHEAD
NORTHCOTE
Ellerslie
New Lynn
BOROUGH ADJACENT TO WELLINGTON:
MIRAMAR
AUCKLAND
WELLINGTON
HAMILTON
ROTORUA
TAURANGA
OPOTIKI
GISBORNE
NEW PLYMOUTH
WANGANUI
PALMERSTON
MASTERTON
NAPIER
HASTINGS
WAIPAWA
WAIPUKURAU
DANNEVIRKE
FOXTON
MARTON
FEILDING
TAIHAPE
WAITARA
TAUMARUNUI
TE KUITI
THAMES
PAEROA
WAIHI
TE AROHA
WHAKATANE
DARGAVILLE
WHANGAREI
KAWAKAWA
KAIKOHE
KAIPARA
WAITEMATA
MANUKAU
HAURAKI GULF
BAY OF PLENTY
HAWKE B.
COOK STRAIT
C. Maria v. Diemen
North C.
Doubtless B.
Bay of Islands
Reef Pt.
Hokianga Har.
Waikato R.
Manukau Har.
Waitemata
Great Barrier I.
C. Colville
C. Runaway
East C.
C. Turnagain
C. Palliser
174°
175°
176°
177°
178°
179°
East Long.


SOUTH ISLAND
OF
NEW ZEALAND.
POPULATION OF TOWNS:
Exceeding 20,000
10,000 to 20,000
4,000 to 10,000
1,000 to 4,000
Under 1,000
Names of Boroughs thus: TEMUKA
Names of Town Districts: Tinwald
C. Farewell
D'Urville I.
TASMAN BAY
COOK STRAIT
Takaka
MOTUEKA
NELSON
RICHMOND
PICTON
BLENHEIM
WESTPORT
RUNANGA
GREYMOUTH
KUMARA
BRUNNER
HOKITIKA
ROSS
Amberley
RANGIORA
KAIAPOI
CHRISTCHURCH
LYTTELTON
BANKS PENIN.
AKAROA
Southbridge
Tinwald
ASHBURTON
Lampstead
GERALDINE
TEMUKA
TIMARU
Jackson's B.
Pleasant Point
WAIMATE
OAMARU
Milford Sd.
NASEBY
HAMPDEN
ARROWTOWN
QUEENSTOWN
CROMWELL
ALEXANDRA
PALMERSTON
WAIKOUAITI
PORT CHALMERS
ROXBURGH
Outram
DUNEDIN
LAWRENCE
TAPANUI
MOSGIEL
Lumsden
MILTON
WAITANGATA
BALCLUTHA
Nightcaps
WINTON
GORE
Clinton
MATAURA
Wyndham
Edendale
Otautau
RIVERTON
INVERCARGILL
INVERCARGILL SOUTH
BLUFF
STEWART I.
BOROUGHS ADJACENT TO CHRISTCHURCH:
SPREYDON
WOOLSTON
RICCARTON
NEW BRIGHTON
SUMNER
TO DUNEDIN:
ST. KILDA
GREEN ISLAND
WEST HARBOUR
East Long.

Population of Boroughs—continued.

Borough.	Population.	Borough.	Population.
Te Kuiti	2,119	Waitara	1,505
Temuka	1,724	Wanganui	15,363
Thames	5,714	Wellington (City) ..	81,301
Timaru	13,230	West Harbour	1,711
Waihi	4,804	Westport	4,248
Waikouaiti	741	Whakatane	1,082
Waimate	1,942	Whangarei	3,522
Waipawa	1,159	Winton	576
Waipukurau	1,230	Woodville	1,136
Wairoa	1,612	Woolston	4,150

METROPOLITAN AND SUBURBAN AREAS.

For various purposes (vital statistics, &c.) metropolitan areas have been created at each of the four chief centres, and suburban areas at nine of the more important secondary centres. Each area includes, in addition to the central borough and suburban boroughs, a considerable non-municipalized area adjacent to and contingent on the centre.

The population figures as estimated at the 31st December, 1919, with necessary subsequent internal amendments due to alteration of boundaries, are as follows:—

ESTIMATED POPULATION OF METROPOLITAN AND SUBURBAN AREAS AS AT 31ST DECEMBER, 1919.

Metropolitan Areas.

Auckland	144,646	Christchurch	101,747
Wellington	100,898	Dunedin	72,048

Suburban Areas.

Gisborne	14,366	Nelson	10,340
Napier	16,383	Grey Valley Boroughs ..	8,495
New Plymouth	11,051	Timaru	15,028
Wanganui	21,778	Invercargill	18,726
Palmerston North	14,866		

TOWN DISTRICTS.

The several stages in the growth of a New Zealand town may be marked thus: The village, taxed by the parent county, and dependent upon the latter for all public works; then the legally constituted town district, still subordinate to the county in some matters, its affairs administered by a Board presided over by a Chairman. When its population exceeds 500 the town district may become independent of the county and control the whole of its revenues. When the population reaches 1,000 full municipal powers may be obtained, with the dignity of a Council presided over by a Mayor; and finally, if the number of inhabitants should reach 20,000 or over, the title of "city" may be assumed, although the constitution remains unaltered. The name of each town district and its

population as estimated on the 31st December, 1919, including alterations due to subsequent changes in boundaries, are as follows:—

(a.) Town Districts not forming Parts of Counties.

Town District.	Population.	Town District.	Population.
Bull's	513	New Lynn	1,613
Castlecliff	1,557	Ngaruawahia	807
Ellerslie	1,457	Nightcaps	641
Gonville	2,950	Otaki	855
Hampstead	1,323	Otautau	712
Havelock North	917	Papakura	953
Helensville	895	Papatoetoe	801
Hikurangi	829	Pleasant Point	601
Hunterville	639	Raetihi	807
Huntly	1,541	Rangataua	435
Johnsonville	940	Taradale	1,066
Lumsden	537	Te Puke	664
Manaia	663	Tinwald	818
Mangapapa	1,169	Tuakau	417
Mangaweka	413	Upper Hutt	1,485
Manunui	863	Waiuku	610
Manurewa	440	Warkworth	667
Martinborough	800	Waverley	661
Matamata	610	Wyndham	660
Morrinsville	999		

(b.) Town Districts forming Parts of Counties.

Town District.	Population.	Town District.	Population.
Amberley	338	Norsewood	274
Clinton	433	Ohaupo	277
Cobden	1,080	Ohura	224
Edendale	391	Onerahi	347
Havelock	296	Opunake	552
Kaikohe	381	Ormondville	334
Kamo	428	Otane	351
Kaponga	434	Otorohanga	392
Kawakawa	350	Outram	365
Kawhia	206	Patutahi	272
Kihikihi	296	Raglan	282
Kohukohu	411	Rongotea	283
Leamington	469	Southbridge	434
Lethbridge	270	Takaka	402
Mercer	352	Te Karaka	356
Normanby	402		

No fewer than nine of the "independent" town districts have sufficient population to enable them to be constituted boroughs, while on the other hand four have fallen below the 500 mark.

Urban Drift.

At the present time there is being exhibited in many countries a tendency for an increasing proportion of their inhabitants to accumulate in towns. This gradual desertion of the rural life for that of the city is usually referred to as "urban drift." That this movement is reflected in New Zealand life is certain, but to provide an exact measure of its growth would be an excessively laborious task. The following method, while imperfect, may be taken as indicating approximately the changing of the population: The total population of towns of over 1,000 inhabitants in 1878 is contrasted with the total population

of that day. Similar calculations have been made for 1886, 1896, 1906, and 1916. To make allowance for normal expansion, the minimum size of towns dealt with has been raised from 1,000 in 1878 to 1,500 in 1886, 2,000 in 1896, 2,500 in 1906, and 3,000 in 1916, a rate roughly commensurate with the growth of the country. The result was:—

Year.	Urban Population.	Total Population.	Urban Population expressed as a Percentage of Total Population.
1878 ..	130,407	414,412	31·47
1886 ..	213,286	578,482	36·87
1896 ..	250,498	703,360	35·61
1906 ..	344,308	888,578	38·75
1916 ..	464,835	1,099,449	42·28

According to this calculation, urban residents formed in 1916 over 42 per cent. of the people, whereas in 1878 they were only 31½ per cent.

Adjacent Islands.

Adjacent to the main Islands are many smaller islands, some of which are of considerable area, and are under cultivation; others are but islets used as sites for lighthouses, while others again are barren and unfitted for human habitation. The Chatham Islands and Great Barrier Island have been constituted counties, and their populations are shown in the list of counties already given. The name and population of each of the other inhabited islands as at the census of 1916 are shown in the following table:—

Islands.	Population.	Islands.	Population.
Mokohinau	8	Slipper	2
Kawau	23	Cuvier	7
Motuketekete ..	2	Mercury	4
Moturekareka	1	Matakana	7
Little Barrier	3	Motiti	6
Motuhora	5	Somes*	7
Waiheke	193	Mana	1
Pakihi	2	Kapiti	3
Ponui	21	The Brothers	3
Rakino	6	D'Urville	87
Motutapu	20	Stephen	11
Motuihi*	6	Quarantine	56
Rangitoto	6	Dog	12
Brown's	5	Centre	9
Rotoroa	125		
Pakatoa	43	Total	697
Tiritiri	13		

* Excluding internment camp.

In 1901 the boundaries of New Zealand were extended to include the Cook and certain other Pacific islands, the population of which is given on the next page.

Maori and Half-caste Population.

A census of the Maori population is taken every five years, the information being obtained by the collectors either directly or through the chief or head of the tribe or hapu. The name, sex, and age, so far as can be ascertained, of

each Maori are entered; but, owing to the nomadic habits of the race and lack of definite knowledge in some particulars, it has been a difficult task in the past. The results of the past six enumerations are as follows:—

Census Year.	Males.	Females.	Total.
1891	22,861	19,132	41,993
1896	21,673	18,181	39,854
1901	23,112	20,031	43,143
1906	25,538	22,193	47,731
1911	26,475	23,369	49,844
1916	25,933	23,843	49,776

The slight decrease in 1916 as compared with 1911 is more than compensated for by the number of Maoris at the front.

The number of half-castes living as members of Maori tribes is given in the next table for six census periods. Those under the first heading are already included among Maoris in the preceding table, the others being classed among the European population.

HALF-CASTES.

Census Year.	Half-castes		Total.
	Living as Members of Maori Tribes.	Living as and among Europeans.	
1891	2,681	2,184	4,865
1896	3,503	2,259	5,762
1901	3,133	2,406	5,539
1906	3,938	2,578	6,516
1911	4,181	2,879	7,060
1916	3,529	3,221	6,750

POPULATION OF COOK AND OTHER PACIFIC ISLANDS INCLUDED WITHIN THE BOUNDARIES OF THE DOMINION.

During the year 1901 the boundaries of the Dominion were extended to include the Cook Group and certain other of the South Pacific islands. No record of the population of these islands was then obtainable, but at each subsequent census an account of the number and birthplaces was taken. The figures for the censuses of 1906, 1911, and 1916 are as follows:—

Census Year.	Males.	Females.	Total.
1906..	6,224	6,116	12,340
1911..	6,449	6,149	12,598
1916..	6,553	6,244	12,797

The islands of Western Samoa are now within the governing authority of the Dominion. An account of the group will be found in the section dealing with Outlying Islands.

SECTION II.—VITAL STATISTICS.

SUBSECTION A.—BIRTHS.

Numbers and Rates.

The number of births registered during 1919 was 24,483 or 21·54 per 1,000 of mean population. This birth-rate of only 21·54 per 1,000, the lowest point ever reached in New Zealand, is somewhat startling. A considerable improvement for 1920 is anticipated if the numbers already recorded in the first part of the year are maintained.

The number of male children born during 1919 was 12,587, and of female children 11,896.

Births: Numbers and Rates.

Year.	Total Number of Births registered.	Birth-rate.		Year.	Total Number of Births registered.	Birth-rate.	
		Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.			Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.
1882–86	19,410*	35·40	100	1915	27,850	25·33	72
1890	18,278	29·44	83	1916	28,509	25·94	73
1895	18,546	26·78	76	1917	28,239	25·69	73
1900	19,546	25·60	72	1918	25,860	23·44	66
1905	23,682	27·22	77	1919	24,483	21·54	61
1910	25,984	26·17	74				

* Average of five years.

Natural Increase.

The decline of the birth-rate in New Zealand has been partially compensated for by a decrease in the death-rate. Nevertheless, the rate of natural increase of population has fallen from 31·19 per 1,000 of mean population in 1870 to 12·03 in 1919.

Period.	Annual Rates per 1,000 living.		
	Births.	Deaths.	Natural Increase.
1871–1875	39·88	12·67	27·21
1876–1880	41·21	11·80	29·41
1881–1885	36·36	10·95	25·41
1886–1890	31·15	9·85	21·30
1891–1895	27·68	10·15	17·53
1896–1900	25·75	9·55	16·20
1901–1905	26·60	9·91	16·69
1906–1910	27·06	9·75	17·31
1911–1915	25·98	9·22	16·76
1919	21·54	9·51	12·03

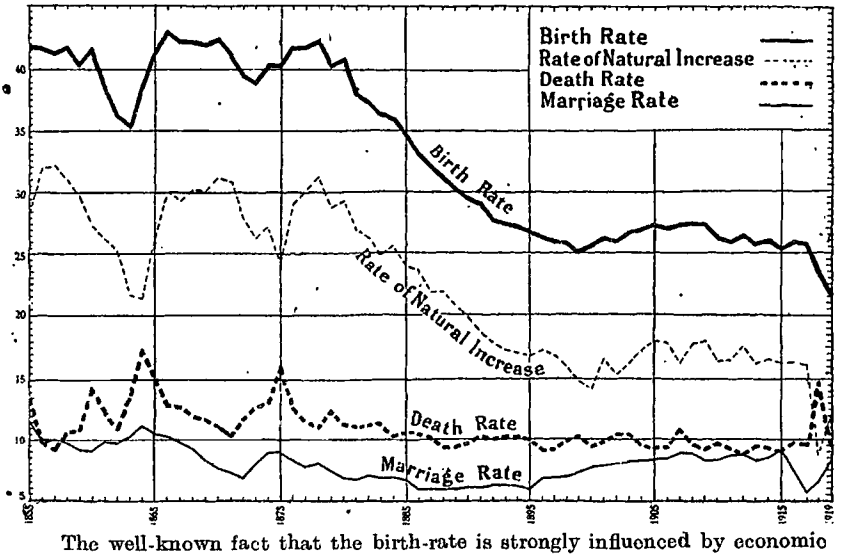
In spite of the fact that the birth-rate in New Zealand is low compared with other countries, yet so low is the Dominion's death-rate that

New Zealand has one of the highest rates of natural increase among countries keeping records of births and deaths.

Birth-rates.

The diagram which follows shows the rates of births and deaths and of natural increase per 1,000 of mean population each year from 1855 to 1919. The marriage-rate is also shown.

Graphs showing the Rates of Births, Deaths, Marriages, and Natural Increase in New Zealand, 1855–1919.



The well-known fact that the birth-rate is strongly influenced by economic factors finds illustration in the position revealed by this graph, falls in the curve occurring during periods of economic depression. Recent declines are, of course, largely, if not wholly, due to war influences. At the present time birth-rates show a world-wide tendency to decline.

Birth-rates (Legitimate) per 1,000 Married Women at Child-bearing Ages for each Census Year, 1878 to 1916.

Year (Census).	Number of Married Women between 15 and 45 Years of Age.	Proportion per Cent. of Married Women in the Female Population aged 15 to 45 Years.	Number of Legitimate Births (Confinements).	Birth-rate per 1,000 Married Women of from 15 to 45 Years of Age.
1878 ..	50,995	63·50	17,196	337·2
1881 ..	57,458	59·76	18,003	313·3
1886 ..	62,704	53·19	18,532	295·5
1891 ..	63,165	48·12	17,455	276·3
1896 ..	69,807	44·12	17,596	252·1
1901 ..	79,406	43·30	19,355	243·8
1906 ..	98,211	46·15	22,352	227·6
1911 ..	119,355	49·59	24,972	209·2
1916 ..	141,322	52·97	26,786	189·5

Births and Birth-rates of Metropolitan Areas.

Taking the whole of the four metropolitan areas into consideration the birth-rate for 1919 was 19·67 per 1,000. Each individual metropolitan area has a lower rate than the Dominion as a whole (21·54 per 1,000), a position which always obtains. The rates for five years, 1915 to 1919, are given below:—

	Births per 1,000 of Population.				
	1915.	1916.	1917.	1918.	1919.
Auckland (including suburbs)*	23·13	23·35	22·33	21·77	19·47
Wellington "	24·19	24·30	25·25	23·15	21·13
Christchurch "	22·19	23·54	22·96	20·22	19·79
Dunedin "	20·73	23·32	22·47	18·69	17·94

* Metropolitan areas in 1917.

The fact is well illustrated above that, of the four centres, Wellington usually has the highest rate and Dunedin the lowest. Explanation of this lies in the difference in age-constitution between the cities. In any year the ages of the parents of the great majority of children born in that year range from 25 to 50 years. Considering this group (*i.e.*, married people of ages 25 to 49 inclusive) it is found that it forms to the total population a proportion of 41·48 per cent. in Auckland, in Wellington 46·19 per cent., in Christchurch 40·66 per cent., in Dunedin only 36·58 per cent. These proportions are clearly reflected in the birth-rates.

Birth-rates of Various Countries.

Of recent years the Australian birth-rate has been higher than that of New Zealand.

The movement over the last ten years is as follows:—

Birth-rates per 1,000 of Population.

State.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Queensland	27·33	27·65	29·67	30·24	29·46	29·35	27·91	29·09	28·37	26·23
New South Wales ..	27·83	28·75	29·86	28·86	28·96	28·33	27·89	28·06	26·59	24·68
Victoria	24·51	24·84	26·39	25·82	25·45	24·55	24·30	23·50	22·29	21·56
South Australia ..	26·50	26·89	28·65	29·08	29·33	26·81	27·37	26·21	25·80	24·27
Western Australia ..	27·99	28·21	28·83	29·36	28·45	27·97	27·21	25·54	22·84	21·44
Tasmania	29·25	28·57	30·53	30·03	30·33	29·32	28·47	27·03	25·91	25·12
Aust. Commonwealth ..	26·73	27·21	28·65	28·25	28·05	27·25	26·78	26·51	25·25	23·78
New Zealand	**26·17**	**25·97**	**26·48**	**26·14**	**25·99**	**25·33**	**25·94**	**25·69**	**23·44**	**21·54**

The birth-rates for ten years in Great Britain and Ireland and certain countries of the European Continent are also given. The decline is steady and continuous, except in the cases of Roumania and Hungary, where the rates are very high.

BIRTH-RATES IN EUROPEAN COUNTRIES, 1905 TO 1914.

Country.	Number of Births per 1,000 of Mean Population.									
	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
Roumania ..	38·3	39·9	41·1	40·3	41·1	39·2	42·3	43·4	42·1	42·5
Hungary ..	36·3	36·5	36·7	36·9	37·7	35·7	35·0	36·3	..	..
Spain ..	35·2	34·0	33·6	34·0	33·5	33·1	31·2	32·6	30·4	29·8
Italy ..	32·7	32·1	31·7	33·7	32·7	33·3	31·5	32·4	31·7	31·1
Austria ..	33·9	35·0	34·0	33·7	33·4	32·5	31·4	31·3	..	..
German Empire	32·9	33·1	32·3	32·1	31·0	29·8	28·6	28·3	27·5	..
Netherlands ..	30·8	30·4	30·0	29·7	29·1	28·6	27·8	28·1	28·1	28·2
Denmark ..	28·4	28·5	28·2	28·5	28·2	27·5	26·7	26·7	25·6	25·6
Scotland ..	28·6	28·6	27·7	28·1	27·3	26·2	25·6	25·9	25·5	26·1
Norway ..	27·4	26·7	26·4	26·3	26·3	26·1	25·9	25·6	25·3	25·2
Switzerland ..	26·9	26·9	26·2	26·4	25·5	25·0	24·2	24·1	23·1	..
England and Wales	27·3	27·2	26·5	26·7	25·8	25·1	24·3	23·9	24·1	23·8
Sweden ..	25·7	25·7	25·5	25·7	25·6	24·7	24·0	23·8	23·1	22·9
Ireland ..	23·4	23·5	23·2	23·3	23·4	23·3	23·2	23·0	22·8	22·6
Belgium ..	26·1	25·7	25·3	24·9	23·7	23·7	22·9	22·6	..	..
France ..	20·6	20·6	19·7	20·1	19·5	19·6	18·7	19·0	19·0	18·0

SEXES OF CHILDREN BORN.

An examination of the figures shows that, with the exception of one year, there has always been a preponderance of males in the number of children born in New Zealand. The proportions are usually shown by stating the number of births of male children to every 1,000 female births. This number has been as high as 1,113 (in 1859), and as low as 991 (in 1860). Little significance can be attached to any figures prior to 1870, on account of the comparatively small number of births. The period preceding 1870 exhibits violent fluctuations in the proportion of males, which tend to disappear as the total of births grows larger. The extreme range since 1870 has been from 1,016 male to 1,000 female births in 1878, to 1,078 in 1875 and 1,073 in 1915.

Year.	Number of Births of		Proportion of Births of Males to every 1,000 Females.	Year.	Number of Births of		Proportion of Births of Males to every 1,000 Females.
	Males.	Females.			Males.	Females.	
1910 ..	13,442	12,542	1,072	1915 ..	14,415	13,435	1,073
1911 ..	13,532	12,822	1,055	1916 ..	14,669	13,840	1,060
1912 ..	13,996	13,512	1,036	1917 ..	14,329	13,910	1,030
1913 ..	14,433	13,502	1,069	1918 ..	13,124	12,736	1,030
1914 ..	14,535	13,803	1,053	1919 ..	12,587	11,896	1,058

PLURAL BIRTHS.

There were 270 cases of twin births (540 children), two cases of triplets and one of quadruplets registered in 1919. The number of children born was 24,483; the number of mothers was 24,206: thus, on an average, one mother in every 89 gave birth to twins or triplets.

The number of cases of plural births and the proportion per 1,000 of the total cases of births during the past five years was,—

Year.	Total Births.	Total Cases.	Cases of Twins.	Cases of Triplets.	Plural Cases per 1,000 of Total Cases.
1915 ..	27,850	27,546	302	1	11·00
1916 ..	28,509	28,184	323	1	11·50
1917 ..	28,239	27,927	312	..	11·17
1918 ..	25,860	25,560	294	3	11·62
1919 ..	24,483	24,206	270	3*	11·15

* Including one case of quadruplets.

The following table shows the sexes in individual cases of twin births for the last eight years :—

Year.	Total Cases.	Both Males.	Both Females.	Opposite Sexes.
1912 ..	329	114	106	109
1913 ..	314	108	86	120
1914 ..	350	105	116	129
1915 ..	302	93	88	121
1916 ..	323	99	98	126
1917 ..	312	90	105	117
1918 ..	294	87	95	112
1919 ..	270	81	79	110

During the eight years 1912–19 there were seventeen cases of triplets. In three cases all the children were males, in four cases all were females, in three cases there were two males and one female, and in each of the remaining seven cases two of the three children were females.

There occurred in 1919 one case of quadruplets, all male children.

An examination of the total still-births recorded during 1915–19 shows that of 3,447 cases 188 (5·45 per cent.) were found in cases of plural births, either one or both of the children being still-born. Since, for living births in the same period, plural cases were only 1·13 per cent. of total cases, it appears that still-births occur proportionately almost five times as often in plural births as in cases of single births.

First Issue and Illegitimate Births, 1919.

Age of Mother, in Years.	Illegitimate Births.	Duration of Marriage, in Months.								Total Legitimate First Births within One Year after Marriage.
		Under 3.	3 and under 6.	6 and under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	
Under 21 ..	348	82	159	71	55	35	47	35	27	511
21 and under 25	362	99	207	116	98	101	198	169	123	1,111
25 „ 30	197	48	82	56	41	70	143	124	92	656
30 „ 35	108	12	20	9	23	21	55	48	48	236
35 „ 40	79	6	16	5	5	8	24	17	23	104
40 „ 45	38	4	4	1	..	3	2	4	1	19
45 and over ..	..	..	..	..	..	..	..	..	..	..
Totals ..	1,132	251	488	258	222	238	469	397	314	2,637

First Births.

A compilation of births registered in 1919 gives 5,485 children (23 per cent. of all legitimate births) as first issue of the existing marriage. Of these 2,851 were males and 2,634 females; the sex-proportion being thus 1,082 males to 1,000 females—somewhat higher than for all births. Plural cases numbered 46, or 0·85 per cent. of the total, as compared with 1·12 per cent. for all births.

Birth-intervals.

The birth statistics for 1918 contained one feature which was by way of a novelty in New Zealand statistics. This consisted of a series of tables showing the period that elapsed between successive births, in conjunction with the total number of children born. One table is repeated in this issue.

Average Interval (in Years) between	Cases in which the Number of Children in the Family was										
	2.	3.	4.	5.	6.	7.	8	9.	10.	Over 10.	All Families.
First and second child	2·96	2·75	2·55	2·35	2·27	2·27	2·24	2·14	2·15	2·01	2·67
Second and third child	..	3·33	2·98	2·69	2·48	2·41	2·27	2·24	2·36	1·92	2·94
Third and fourth child	..	..	3·33	2·96	2·72	2·63	2·39	2·42	2·25	2·21	2·98
Fourth and fifth child	..	..	..	3·30	2·92	2·65	2·61	2·50	2·49	2·27	2·97
Fifth and sixth child	..	..	..	..	3·20	2·80	2·65	2·54	2·43	2·19	2·88

Illegitimacy.

The births of 1,138 children (581 males, 557 females) were illegitimate: thus 46 in every 1,000 children registered were born out of wedlock.

Illegitimate Children, 1919.—Ages of Mothers.

Age.	Single Cases.	Plural Cases.	Age.	Single Cases.	Plural Cases.	Age.	Single Cases.	Plural Cases.
Years.			Years.			Years.		
14	1	..	25	59	1	36	17	..
15	10	..	26	44	..	37	12	..
16	32	..	27	33	..	38	16	..
17	41	..	28	28	..	39	13	1
18	75	1	29	32	..	40	12	..
19	79	..	30	33	1	41	6	..
20	109	..	31	17	..	42	6	..
21	116	1	32	14	1	43	5	..
22	98	..	33	25	..	44	9	..
23	87	..	34	17	..			
24	60	..	35	20	..	Totals ..	1,126	6

The proportion of illegitimate births per 1,000 unmarried women —*i.e.*, spinsters and widows—at the reproductive ages, covering a period of twenty-five years, is shown in the following table.

ILLEGITIMATE BIRTH-RATES.

Year.	Unmarried Women aged 15–45 Years.	Illegitimate Births.	Illegitimate-birth Rate per 1,000 Unmarried Women.
1891	68,990	638	9·25
1896	89,722	834	9·30
1901	105,420	937	8·89
1906	116,506	1,132	9·72
1911	116,726	1,078	9·24
1916	125,461	1,159	9·24

The rates of illegitimacy in Australasia are quoted. The average rate for New Zealand for the ten years (4·37 per 100 of all births) compares favourably with that of the Commonwealth (5·39 per 100).

PROPORTION OF ILLEGITIMATE BIRTHS IN EVERY 100 BIRTHS.

Year.	Queensland.	New South Wales.	Victoria.	South Australia.	Western Australia.	Tasmania.	Commonwealth.	New Zealand.
1909	7·05	6·44	5·94	4·18	3·95	5·45	6·01	4·61
1910	6·39	6·28	5·60	4·32	4·13	5·33	5·75	4·47
1911	6·22	6·14	5·96	4·21	4·47	5·33	5·79	4·09
1912	6·14	5·64	5·72	4·71	4·39	4·78	5·53	4·28
1913	6·22	5·35	6·03	4·18	4·40	5·18	5·48	4·23
1914	5·77	5·29	5·56	3·87	4·22	5·90	5·26	4·59
1915	5·36	4·97	5·74	4·00	4·24	5·32	5·12	4·14
1916	5·11	4·73	5·15	3·80	3·75	5·05	4·77	4·10
1917	5·01	4·74	5·53	3·96	4·15	5·28	4·91	4·56
1918	5·46	5·18	5·85	4·02	4·02	5·28	5·23	4·65

THE LEGITIMATION ACT.

The Legitimation Act makes provision for the legitimation of children born before marriage on the subsequent intermarriage of their parents. For legitimation purposes Registrars must register a birth when called upon to do so by any person claiming to be the father of an illegitimate child; but such person is required to make a solemn declaration that he is the father, and that at the time of the birth there existed no legal impediment to his marriage with the mother of the child. He has also to produce the evidence of his marriage. The following is the number of legitimations in the past ten years, and the total since the Act came into force:—

Year.	Number of Children legitimized.			Year.	Number of Children legitimized.		
	Previously registered.	Not Previously registered.	Total.		Previously registered.	Not Previously registered.	Total.
1910 ..	75	46	121	1916 ..	190	91	281
1911 ..	76	46	122	1917 ..	213	96	309
1912 ..	86	51	137	1918 ..	128	76	420
1913 ..	89	72	161	1919 ..	100	66	166
1914 ..	99	66	165				
1915 ..	100	67	167	Totals ..	1,904	1,140	3,044

Still-births.

The registration of still-births has been made compulsory in New Zealand as from the 1st March, 1913. Still-births are not included either as births or as deaths in the various numbers and rates shown in this subsection and in that relating to deaths.

In the 680 still-births registered in 1919 are included eight cases of twins, and thirty-four cases where one child of twins was still-born.

The sexes recorded in cases of still-births during each of the last five years are as follows:—

Year.	Male.	Female.	Not stated.	Total.
1915	382	340	6	728
1916	383	295	4	682
1917	375	305	14	694
1918	396	300	5	701
1919	377	288	15	680

Maori Births.

The number of births of Maoris registered during 1919 under the provisions of section 20 of the Births and Deaths Registration Amendment Act, 1912, was 995. Only 14 Maori births were registered under the main Act.

Cook Islands and Niue.

Regulations under the Cook Islands Act, 1915, providing for compulsory registration of births and deaths in the Cook Islands and Niue from the 1st July, 1916, were gazetted on the 29th June, 1916.

Islands.	Number of Births.	Islands.	Number of Births.
Rarotonga	160	Mauke	19
Aitutaki	60	Mitiaro	5
Mangaia	63	Penrhyn	4
Manihiki ..	14	Niue	110
Rakahanga ..			
Atiu	46	Total	481

NOTE.—In some cases the above figures are for the calendar year 1919, others for year ending March, 1920, others again for different periods.

SECTION II.—VITAL STATISTICS—*continued.*

SUBSECTION B.—MARRIAGES.

Numbers and Rates.

In the following table are shown the numbers and rates for a series of years. A column is added showing the index number for the year as compared with the average of the five years 1882–86, taken as 100.

The marriage-rate for the period under review—war years 1915–18 excepted — shows a general upward tendency, having been above 8 per 1,000 in each year since and including 1902. Reference to the diagram on page 22 will show that the marriage-rate was at its lowest in the period 1885 to 1895, and that the rate in the early years of registration was considerably in excess of that in even the best of recent years.

Marriages: Number and Rate.

Year	Total Number of Marriages registered.	Marriage-rate.		Year.	Total Number of Marriages registered.	Marriage-rate.	
		Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.			Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.
1882–86	3,663*	6·68	100	1915	10,028	9·12	137
1890	3,797	6·12	92	1916	8,213	7·47	112
1895	4,110	5·94	89	1917	6,417	5·84	87
1900	5,860	7·67	115	1918	6,227	5·65	85
1905	7,200	8·28	124	1919	9,519	8·38	125
1910	8,236	8·30	124				

* Average for five years.

The cessation of hostilities at the end of 1918 and the repatriation during 1919 of the great bulk of the Expeditionary Force has led to a healthy increase in marriages. Though not quite reaching the normal level of pre-war years, the progress made is satisfactory in view of two rate-depressing influences: first, the loss to the Dominion of many thousands of lives; and, secondly, the marriage abroad of no inconsiderable body of soldiers, the majority of whom would otherwise have married in this country.

Marriages in each Quarter.

Year.	March Quarter.	June Quarter.	September Quarter.	December Quarter.
1915	1,984	2,728	2,247	3,069
1916	2,214	2,393	1,773	1,833
1917	1,511	1,805	1,505	1,596
1918	1,457	1,756	1,593	1,421
1919	1,631	2,432	2,450	3,006
Quinquennial average..	1,759	2,223	1,914	2,185

It will be seen that the June quarter is apparently considered the most propitious for the solemnization of marriage. The two years exceptional in this respect are 1915 and 1919. In the first year the December quarter was swelled by the influence of the National Registration Act of October, 1915; and the second may be explained by the celebration of many marriages postponed until the return of soldiers abroad.

An additional investigation of marriages contracted in 1919 reveals the pre-eminence which December has attained as a suitable month for entering the matrimonial state. The marriages contracted in each month were as follows:—

January	558	August	798
February	501	September	819
March	572	October	923
April	932	November	801
May	590	December	1,282
June	910		
July	833	Total	9,519

Wednesday claims almost half of the total marriages—

Sunday	54	Friday	476
Monday	1,109	Saturday	847
Tuesday	1,645		
Wednesday	4,109	Total	9,519
Thursday	1,279		

The days of the year on which an exceptionally large number of marriages were performed were,—

23rd April	137	30th April	110
26th November	120	15th October	107
25th June	117	31st December	106

All these days were, it may be remarked, Wednesdays. Easter Monday, usually considered a most suitable day, ranked only thirteenth in favour.

Rates of various Countries.

A comparison of the marriage-rate of each Australian State with New Zealand for ten years is given. The Commonwealth rate has for some years been higher than that of this country.

Marriages per 1,000 of Mean Population in Australia and New Zealand.

Year.	Queensland.	New South Wales.	Victoria.	South Australia (Proper).	Western Australia.	Tasmania.	Commonwealth.	New Zealand.
1910	8·06	8·76	7·98	9·17	7·77	7·82	8·37	8·30
1911	8·41	9·24	8·34	9·81	8·44	7·76	8·79	8·70
1912	8·91	9·60	8·65	9·62	8·37	7·86	9·07	8·81
1913	8·67	9·02	8·13	9·40	8·19	8·27	8·66	8·25
1914	8·73	9·37	8·31	9·11	8·22	7·78	8·80	8·51
1915	8·93	9·68	9·00	9·02	8·01	8·02	9·14	9·12
1916	7·69	8·74	8·05	8·31	7·51	7·23	8·21	7·47
1917	7·16	7·09	6·76	7·52	5·25	5·72	6·87	5·84
1918	6·99	6·90	6·46	7·25	5·18	5·55	6·65	5·65
1919	7·62	8·04	7·98	8·46	6·78	7·16	7·88	8·38

The average rate for New Zealand in normal years is higher than the rate for most of the European countries with the exception of the races of the east and south-east of Europe.

Condition of Contracting Parties.

The table which follows gives information as to the conjugal condition of persons married in each of the past ten years, divorced men and women being classed as bachelors and spinsters.

Year.	Marriages contracted between				Number of Divorced Persons married (included previously).	Total Marriages registered.
	Bachelors and Spinsters.	Bachelors and Widows.	Widowers and Spinsters.	Widowers and Widows.		
1910 ..	7,440	306	342	148	150	8,236
1911 ..	8,036	258	365	166	165	8,825
1912 ..	8,350	253	413	133	204	9,149
1913 ..	8,034	274	370	135	218	8,813
1914 ..	8,672	276	398	134	204	9,280
1915 ..	9,124	337	394	173	227	10,028
1916 ..	7,323	329	408	153	230	8,213
1917 ..	5,613	284	369	151	218	6,417
1918 ..	5,370	284	427	146	261	6,227
1919 ..	8,337	403	572	207	345	9,519

The figures for 1919 are given herewith in more detail as to conjugal condition of bride and bridegroom immediately prior to the marriage.

Condition of Bridegrooms.	Condition of Brides.			
	Spinsters.	Divorced Women.	Widows.	Total.
Bachelors	8,079	154	372	8,605
Divorced men	88	16	31	135
Widowers	532	40	207	779
Total	8,699	210	610	9,519

Included amongst widows in 1919 are eighteen married women, and amongst the widowers eleven men, who elected to go through the form of marriage with other persons under the protection of the provisions of section 224, subsection (5), of the Crimes Act, which reads, "No one commits bigamy by going through a form of marriage if he or she has been continually absent from his or her wife or husband for seven years then last past, and is not proved to have known that his wife or her husband was alive at any time during those seven years."

Ages of Persons married.

Of the persons married in 1919, 344 bridegrooms and 1,272 brides were under twenty-one years of age. Of the bridegrooms, ten were between

seventeen and eighteen, while thirty-seven were between eighteen and nineteen. Of the brides, four were between fifteen and sixteen, and twenty-eight between sixteen and seventeen years of age. A table is given showing relative ages of bridegrooms and brides in groups of years.

AGES OF PERSONS MARRIED, 1919.

Age of Bridegroom, in Years.	Age of Bride, in Years.							Total Bride-grooms.
	Under 21.	21 and under 25	25 and under 30	30 and under 35	35 and under 40	40 and under 45	45 and over.	
Under 21 ..	199	125	17	3	..	..	..	344
21 and under 25	501	1,041	269	39	4	1	..	1,855
25 " 30	387	1,263	1,083	207	49	4	1	2,994
30 " 35	114	586	774	392	93	19	10	1,988
35 " 40	48	210	338	302	166	61	21	1,146
40 " 45	20	58	106	129	116	87	35	546
45 and over ..	3	30	59	85	112	127	230	646
Total brides	1,272	3,308	2,646	1,157	540	299	297	9,519

The decrease in the proportion of men at the ages at which marriages are usually solemnized is exemplified in the following statement giving average age of bridegrooms and brides over a series of years :—

MEAN AGE AT MARRIAGE.

Year.	Mean Age of Bridegrooms.	Mean Age of Brides.	Year.	Mean Age of Bridegrooms.	Mean Age of Brides.
1900 ..	29·91	25·29	1912 ..	29·95	26·39
1903 ..	29·89	25·84	1915 ..	30·03	26·56
1906 ..	29·76	25·97	1918 ..	31·57	27·16
1909 ..	30·11	26·40	1919 ..	31·21	27·11

In England the mean age of those whose ages were stated was (average of the five years 1910–14) 29·02 years for men and 26·77 years for women. As in the case of New Zealand, ages of both bridegrooms and brides have risen swiftly during the war years, reaching in 1917, 30·04 years for bridegrooms and 27·27 for brides. Thus the average age at marriage in New Zealand would appear to be higher for men, but slightly lower for women, than in England. The average age of all spinsters married in New Zealand in 1919 was 26·03 years. Australian figures for 1918 give the mean ages of groom and bride as 29·55 and 26·11 respectively.

The foregoing figures give the average age at marriage, but these do not correspond with the popular age, if the age at which the most marriages are celebrated may be so termed.

In 1919 ages twenty-six and twenty-seven compete for pride of place for bridegrooms, and twenty-one holds good in the case of brides. If the marriages of spinsters only be considered, age twenty-one is still the most popular.

MARRIAGES OF MINORS.

Of every 1,000 men married in 1919, 36 were under twenty-one years of age, while 134 in every 1,000 brides were under twenty-one. The proportion

of bridegrooms under twenty-one is in normal years 2 per cent. of the total number. The proportions for 1917 (3·6 per cent.), 1918 (5·1 per cent.), and 1919 (3·6 per cent.) therefore represent high increases in marriages of male minors. No corresponding rise occurs in the proportion of marriages of female minors.

BRIDEGROOMS AND BRIDES UNDER AND OVER TWENTY-ONE, 1910–19.

Year.	Bridegrooms.		Brides.		Minors, per 100 Marriages.	
	Adults.	Minors.	Adults.	Minors.	Bride-grooms.	Brides.
1910 ..	8,080	156	6,975	1,261	1·95	15·70
1911 ..	8,653	172	7,499	1,326	1·95	15·02
1912 ..	8,947	172	7,688	1,461	1·88	15·97
1913 ..	8,654	159	7,419	1,394	1·80	15·82
1914 ..	9,085	195	7,842	1,438	2·10	15·50
1915 ..	9,819	209	8,516	1,512	2·08	15·07
1916 ..	8,052	161	6,943	1,270	1·96	15·46
1917 ..	6,187	230	5,943	1,074	3·58	16·74
1918 ..	5,912	315	5,266	961	5·06	15·43
1919 ..	9,175	344	8,247	1,272	3·61	13·36

The ages at which persons may contract binding marriages are the same as in England—twelve years for females and fourteen for males. Marriage may be contracted at earlier ages than those stated, but would be voidable at the discretion of either of the parties upon reaching the age of twelve or fourteen, as the case may be, and without the necessity of proceedings in Court.

FERTILITY OF MARRIAGES.

In connection with the fertility of marriages the succeeding table is of interest. The number of children born to the marriages in existence at the census in 1916 was over three. It should be kept in mind that this number does not represent the average children of a parent, but only the average children of the existing marriage, which is necessarily somewhat less than in the former case.

AVERAGE ISSUE PER MARRIAGE.

Duration of existing Marriage.	Average of Issue born.		
	New Zealand, Census, 1916.	New Zealand, Census, 1911.	Australia, Census, 1911.
Under 5 years	0·88	1·21	0·89
5 to 9 „	2·18	2·51	2·29
10 „ 14 „	3·05	3·54	3·34
15 „ 19 „	3·77	4·39	4·24
20 „ 24 „	4·35	5·23	5·05
25 „ 29 „	4·99	5·92	5·87
30 „ 34 „	5·65	6·78	6·67
35 „ 39 „	6·46	7·38	7·25
40 „ 45 „	7·16	7·81	7·74
45 and over	7·76	8·34	8·37
Unspecified	3·05	3·61	4·53
All periods	3·24	3·94	3·78

The heavy decline from 1911 to 1916 may perhaps be discounted to some extent by the fact that in the prior year the proportion of cases where the number of issue was not stated formed nearly 12 per cent. of the total.

These cases were not included in computing the averages, and may have belonged in any proportion to any group. In 1916 the percentage of unstated cases was reduced to less than 1 per cent.

The continuous rise during all periods of duration of marriage is at first glance rather curious, since additions to families after a marriage of thirty years' standing would be infinitesimal, and would certainly not take place after forty years. It is, however, merely the effect of the steady decline in the once high birth-rate. Taking thirty years of marriage as the point marking the limit of fertility, then the average issue in respect of marriages of longer duration was 7·41 in 1911 and 6·52 in 1916.

Marriages by Ministers of various Denominations.

Of the 9,519 marriages registered in 1919, Church of England clergymen officiated at 2,595, Presbyterians at 2,462, Methodists at 1,114, and Roman Catholics at 1,055, while 1,801 marriages were celebrated before Registrars.

Denomination.	Percentage of Marriages.				
	1915.	1916.	1917.	1918.	1919.
Church of England	26·76	25·73	24·54	25·36	27·26
Presbyterians	25·84	25·36	22·92	24·09	25·87
Methodists	11·83	10·47	10·44	11·22	11·70
Roman Catholics	11·18	12·02	11·94	11·19	11·08
Other denominations	5·83	5·37	5·39	5·06	5·17
Before Registrars	18·56	21·05	24·77	23·08	18·92
	100·00	100·00	100·00	100·00	100·00

Number of Officiating Ministers.

The number of names on the list of officiating ministers under the Marriage Act is (May, 1920) 1,638, and the denominations to which they belong are shown hereunder:—

Denomination.	Number.
Specified in statute—	
Church of England	440
Presbyterian Church of New Zealand	366
Methodist Church of New Zealand	234
Roman Catholic Church ..	269
Congregational Independents ..	28
Baptists	61
Lutheran Church	7
Hebrew Congregations ..	5
Not specified in statute—	
Church of Christ	34
Salvation Army	116
Catholic Apostolic Church ..	4
Old Catholic Church	
Unitarians	3
Seventh-day Adventists ..	18
Latter-day Saints	9
Church of the Seven Rules of Jehovah	15
Ringatu Church	11
Others	18
Total ..	1,638

The Ringatu Church and the Church of the Seven Rules of Jehovah are Maori denominations.

Marriage Register signed by Mark.

Of the men married in 1919, eight, and of the women fourteen, signed the register by mark.

Of twenty-two cases in 1919, eight (five males, three females) were those of New-Zealanders by birth, all being under the age of sixty. In three instances where both groom and bride were Chinese, the bride signed by mark. Birthplaces of the remainder were: England, 4; Ireland, 3; Scotland, 1; Denmark, 1; Tasmania, 1; South Africa, 1.

Marriages in Cook Islands.

According to information received from the Cook Islands Department, the following are the figures of marriages solemnized in the Cook Islands during the year ended 31st March, 1920:—

Island.	Number of Marriages.	Island.	Number of Marriages
Rarotonga	80	Mauke (nine months) ..	8
Aitutaki	43	Rakahanga	1
Mangaia	14	Atiu	9
Manihiki (nine months) ..	1	Niue	71
Mitiaro	5	Total	232

Note.—In some cases the figures quoted are for the calendar year or for other periods.

SECTION II.—VITAL STATISTICS—*continued.*

SUBSECTION C.—DEATHS.

NUMBERS AND RATES.

THE deaths registered in 1919 were 10,808, representing a rate of 9·51 per 1,000 of mean population. Although, with the exception of 1918, in which occurred the disastrous influenza epidemic, the number of deaths is a record, the rate is nevertheless quite normal.

The following table shows the number of deaths and the death-rate; also a comparison with the average rate for 1882–86:—

Year.	Total Number of Deaths.	Death-rate.		Year.	Total Number of Deaths.	Death-rate.	
		Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.			Per 1,000 of Population.	Compared with Rate in 1882–86, taken as 100.
1882–86	5,944*	10·84	100	1910	9,639	9·71	89
				1915	9,965	9·06	84
1890 ..	5,994	9·66	89	1916	10,596	9·64	89
1895 ..	6,863	9·91	91	1917	10,528	9·58	88
1900 ..	7,200	9·43	87	1918	16,364	14·84	137
1905 ..	8,061	9·27	86	1919	10,808	9·51	88

* Average for five years.

The death-rates of males and females for the last ten years are shown separately in the next table, also the number of male deaths to every 100 female deaths, and the death-rate of males expressed as an index number of the female rate, taking the latter as equal to 100.

Year.	Deaths per 1,000 of Population.			Male Deaths to every 100 Female Deaths.	Male Rate expressed as Index Number of Female Rate (=100).
	Males.	Females.	Total.		
1910 ..	10·67	8·63	9·71	139	124
1911 ..	10·46	8·21	9·39	142	127
1912 ..	9·83	7·79	8·87	140	126
1913 ..	10·46	8·38	9·47	138	125
1914 ..	10·53	7·98	9·31	144	132
1915 ..	10·19	7·87	9·06	137	129
1916 ..	11·14	8·13	9·64	138	138
1917 ..	11·09	8·09	9·58	134	137
1918 ..	18·03	11·77	14·84	147	153
1919 ..	10·98	7·36	9·51	148	149

Prior to the war period, the excess of male over female population had the effect of showing a smaller variation between death-rates for the two sexes than was indicated by a comparison of numbers of deaths.

The withdrawal of a large number of males between the ages of 20 and 45 for military service overseas, however, reduced the male population without proportionately reducing the total of male deaths. Consequently there has been a tendency towards an increase in the crude male death-rate.

For the purpose of considering the mortality in New Zealand more closely than can be done by means of crude death-rates, it is desirable to ascertain the rates at different age-periods of the population.

DEATH-RATES PER 1,000 LIVING AT VARIOUS AGE-PERIODS.

Ages, in Years.	Averages, 1910–14.	1915.	1916.	1917.	1918.	1919.	Increase, 1910–14 to 1919.
							Per Cent.
Under 5 ..	16·46	14·27	15·49	14·02	14·12	11·77	− 28·49
5 and under 10	1·72	1·86	2·61	2·44	2·30	1·93	+ 12·21
10 " 15	1·32	1·47	1·59	1·39	1·98	1·49	+ 12·88
15 " 20	2·10	1·83	2·35	2·05	5·16	2·24	+ 6·67
20 " 25	2·83	3·19	3·16	3·40	10·03	2·74	− 3·18
25 " 35	3·93	3·79	3·91	4·19	15·12	3·95	+ 0·51
35 " 45	5·98	5·81	6·67	5·76	14·79	6·01	+ 0·50
45 " 55	9·79	9·40	10·24	8·93	15·72	10·01	+ 2·25
55 " 65	19·54	20·08	19·22	19·07	23·89	19·84	+ 1·54
65 " 75	46·31	41·85	40·22	44·78	50·42	45·56	− 1·62
75 and over ..	138·58	134·83	142·75	128·55	145·94	143·53	+ 3·57
All ages ..	9·35	9·06	9·64	9·58	14·84	9·51	+ 17·1

Besides advantages of climate, New Zealand possesses a population younger in age constitution than that of most other countries—conditions favourable to a low rate of mortality. Another table is given comparing death-rates at twelve age-periods for 1917 with those of England and Wales. In only one instance is the Dominion rate higher than the corresponding rate in England and Wales. This occurs in the female death-rate for the age-period 25–35 years.

DEATH-RATE PER 1,000 PERSONS LIVING, ACCORDING TO SEX, FOR THE YEAR 1917, COMPARED WITH ENGLAND AND WALES.

Ages, in Years.	New Zealand.		England and Wales.	
	Males.	Females.	Males.	Females.
Under 5	15·32	12·66	31·7	26·2
5 and under 10	2·66	2·21	3·2	3·0
10 " 15	1·63	1·17	2·1	2·2
15 " 20	2·08	2·02	8·5	3·1
20 " 25	4·16	2·95		3·3
25 " 35	4·53	3·91		3·7
35 " 45	6·61	4·93		6·0
45 " 55	9·73	7·99	14·4	10·6
55 " 65	20·23	17·63	29·4	22·2
65 " 75	42·76	40·06	67·1	50·2
75 " 85	118·09	100·20	157·5	126·8
85 and over	286·23	244·88	302·1	280·6
All ages	11·09	8·10	17·8	12·1

Ages at Death.

The deaths occurring during 1919 are tabulated below in single ages up to five years, and thereafter in groups, showing males and females separately:—

Ages.	Males.	Females.	Total.	Ages.	Males.	Females.	Total.
Months.				Years.			
Under 1 ..	417	278	695	40–45 ..	275	188	463
1–3 ..	87	71	158	45–50 ..	315	202	517
3–6 ..	55	54	109	50–55 ..	307	243	550
6–12 ..	77	69	146	55–60 ..	322	229	551
Years.				60–65 ..	437	291	728
1–2 ..	87	82	169	65–70 ..	526	324	850
2–3 ..	67	54	121	70–75 ..	531	377	908
3–4 ..	51	43	94	75–80 ..	643	448	1,091
4–5 ..	45	36	81	80–85 ..	523	334	857
5–10 ..	130	114	244	85–90 ..	270	185	455
10–15 ..	80	86	166	90–95 ..	54	58	112
15–20 ..	119	99	218	95–100 ..	16	13	29
20–25 ..	136	111	247	101 ..	1	1	2
25–30 ..	165	182	347	103 ..	..	1	1
30–35 ..	212	199	411	Totals ..	6,207	4,601	10,808
35–40 ..	259	229	488				

The average age at death of persons of either sex in each of the ten years 1910–19 was as follows:—

Year.	Males.	Females.	Year.	Males.	Females.
1910 ..	44·47 years.	42·25 years.	1915 ..	47·24 years.	44·71 years.
1911 ..	46·17 "	42·37 "	1916 ...	46·06 "	44·01 "
1912 ..	47·19 "	44·91 "	1917 ..	48·33 "	45·51 "
1913 ..	46·26 "	43·04 "	1918 ..	44·56 "	44·29 "
1914 ..	46·97 "	44·27 "	1919 ..	50·73 "	48·47 "

The average age at death, taking both sexes into account, was 49·77 years for 1919.

Expectation of Life.

The 1915 issue of the Year-book contained results of a mortality investigation undertaken from the results of the five censuses 1891 to 1911, inclusive, in conjunction with the records of deaths. Considerations of space allow only the following to be repeated in this issue:—

Expectation of Life or Average After-lifetime in New Zealand at Decennial Age-periods.

Age.	Males.	Females.	Age.	Males.	Females.
Years.	Years.	Years.	Years.	Years.	Years
0	59·165	61·764	50	22·672	24·295
5	60·581	62·211	60	15·508	16·774
10	56·144	57·754	70	9·383	10·311
20	47·200	48·770	80	5·294	5·815
30	38·775	40·477	90	2·765	2·900
40	30·540	32·368	100	0·720	0·723

Death-rates of Various Countries.

A table is given showing the death-rates of the Australian States and Commonwealth, and of New Zealand, in each of the ten years 1910–19.

Death-rates of Australasia per 1,000 of Mean Population, 1910–19.

Country.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
Queensland	9·71	10·65	10·96	10·39	9·97	11·00	11·09	9·64	10·89	12·42
New South Wales ..	9·89	10·37	10·86	10·89	10·11	10·48	10·63	9·60	9·84	13·40
Victoria	11·49	11·45	12·23	11·11	11·59	11·10	11·70	10·36	10·70	13·21
South Australia (proper)	10·09	9·82	10·28	10·82	10·71	10·67	11·72	10·10	9·97	12·01
Western Australia ..	10·11	10·19	11·06	9·34	9·41	9·28	9·80	8·97	9·11	11·10
Tasmania	11·10	10·13	10·73	10·87	9·67	10·11	10·38	8·89	8·84	10·37
Commonwealth ..	10·43	10·66	11·23	10·87	10·51	10·66	11·04	9·80	10·09	12·82
New Zealand	**9·71**	**9·39**	**8·87**	**9·47**	**9·31**	**9·06**	**9·64**	**9·58**	**14·84**	**9·51**

New Zealand has ordinarily a lower death-rate than any of the Australian States, which, again, have considerably lower rates than other countries. Abnormalities in 1918 and 1919 are due to the pandemic of influenza.

Standardization of Death-rates.

Perfect accuracy in comparing one country with another can be attained only by the use of what is termed an "index of mortality." The proportions of the living vary in regard to the different age-groups, and the ordinary death-rate—which is calculated on the population as a whole—does not afford a true means of judging of the relative healthiness of the places compared. But by taking a population like that of Sweden, and applying the percentage at each age-group to the death-rates, a standard of health or index of mortality can be arrived at. This has been done for New Zealand in accordance with a resolution of the Statistical Conference held at Hobart in 1902, and the result is expressed in tabular form.

Index of Mortality in New Zealand for 1919.

Ages, in Years.	Estimated Mean Population.	Number of Deaths.	Death-rate per 1,000.	Percentage of Population of Sweden, 1890 (Standard).	Index of Mortality in New Zealand per 1,000.
Under 1 ..	27,394	1,108	40·45	2·55	1·03
1 and under 20 ..	441,428	1,093	2·48	39·80	0·98
20 " 40 ..	371,006	1,493	4·02	26·96	1·08
40 " 60 ..	211,380	2,081	9·84	19·23	1·89
60 and upwards ..	85,181	5,033	59·09	11·46	6·77
Totals ..	1,136,389	10,808	9·51	100·00	11·75

The New Zealand rates may be compared with those of the Australian States and of the Commonwealth standardized by the same system.

STANDARDIZED DEATH-RATES, 1910–19.

Country.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.
New Zealand ..	**12·04**	**11·83**	**11·27**	**11·92**	**11·85**	**11·38**	**11·88**	**11·66**	**16·80**	**11·75**
Queensland ..	12·44	13·57	13·91	13·25	12·70	14·30	14·37	12·64	13·94	15·97
New South Wales	12·36	13·23	13·63	13·61	12·72	13·24	13·48	12·45	12·86	16·48
Victoria.. ..	14·11	14·23	14·94	13·50	14·11	13·54	14·28	12·81	13·23	15·51
South Australia ..	12·39	12·18	12·76	13·25	13·03	13·09	14·45	12·65	12·53	14·59
Western Australia	13·31	13·47	14·55	12·58	12·56	12·79	14·15	12·93	13·69	15·50
Tasmania ...	13·59	12·97	13·69	13·54	12·11	13·04	13·43	11·78	11·70	13·29
Commonwealth ..	13·17	13·55	14·08	13·47	13·18	13·44	13·99	12·63	13·07	15·75

Where comparisons are restricted to the figures for different years in a country such as New Zealand, where age and sex constitution are undergoing gradual change, it is preferable to use as a standard the constitution of the population of the same country at some fixed date.

In the following table the rates have been standardized on the population as disclosed at the census of 1911.

DEATH-RATES, CRUDE AND STANDARDIZED.

Year.	Crude (Actual) Death-rate.	Standardized Rate.	Year.	Crude (Actual) Death-rate.	Standardized Rate.
1872	11·39	12·36	1915	9·06	9·09
1875	15·92	17·30	1916	9·64	9·22
1885	10·76	12·36	1917	9·58	9·04
1895	9·91	11·22	1918	14·84	14·66
1905	9·27	9·60	1919	9·51	9·02

DEATHS AND DEATH-RATES OF METROPOLITAN AREAS.

The death-rates for the cities, including suburbs, for five years are as below :—

	Deaths per 1,000 of Population:				
	1915.	1916.	1917.	1918.	1919.
Auckland (including suburbs)* ..	9·05	9·58	10·45	18·07	10·68
Wellington " ..	9·71	9·45	9·37	15·71	11·14
Christchurch " ..	9·01	10·84	10·04	15·47	10·77
Dunedin " ..	11·03	11·72	11·58	16·20	11·32

* Metropolitan areas in 1917.

Wellington has proportionately fewer old people than the other three centres, and this explains largely its lower average death-rate. Dunedin, on the other hand, has a higher proportion of old people in its population than Auckland or Christchurch, and has consequently the highest death-rate of all four centres, notwithstanding its low rate of infantile mortality.

ORPHANHOOD.

The table following shows the number of living issue left by married men whose deaths were registered during the ten years 1910–19, the information being given according to the age of father and of issue. It will be seen that during the period under review 26,967 fathers left issue to the number of 126,901 an average of 4·71. There were also 4,582 married men who died without leaving issue.

NUMBER AND AGES OF ISSUE LEFT BY MARRIED MEN, 1910–19.

Age of Issue, in Years.	Number of Issue left by Fathers dying within the Age-groups shown at Head of Column.								
	20 and under 30.	30 and under 40.	40 and under 50.	50 and under 60.	60 and under 65.	65 and under 70.	70 and under 80.	80 and over.	Totals.
0	157	366	164	61	10	2	2	..	762
1	188	512	257	76	15	7	4	..	1,059
2	174	624	341	125	24	14	6	..	1,308
3	138	638	406	140	27	8	6	3	1,366
4	93	628	423	160	21	17	12	1	1,355
5	69	600	505	166	27	24	21	2	1,414
6	45	596	498	230	40	30	22	7	1,468
7	16	559	537	273	45	47	25	2	1,504
8	9	418	564	333	63	34	33	5	1,459
9	8	393	627	327	78	54	37	4	1,528
10	3	363	610	405	91	59	58	8	1,597
11	1	267	628	422	105	72	67	3	1,565
12	..	217	621	486	142	97	62	8	1,633
13	..	144	605	503	156	103	82	15	1,608
14	..	100	576	602	177	138	108	11	1,712
15	..	77	515	595	209	133	123	13	1,665
16	..	48	536	675	233	180	158	27	1,857
17	..	22	448	708	296	207	208	18	1,907
18	..	13	437	693	329	226	221	28	1,947
19	..	4	355	803	380	280	283	57	2,162
20	..	2	317	801	406	286	332	39	2,183
21 and over	..	7	853	8,056	9,303	13,343	38,038	22,779	92,379
Unspecified	13	69	168	232	207	236	493	45	1,463
Totals ..	914	6,667	10,991	16,872	12,384	15,597	40,401	23,075	126,901
Married men who died—									
(*a*) Without leaving issue	270	638	610	645	347	433	998	641	4,582
(*b*) Leaving issue ..	531	2,575	3,091	3,719	2,400	2,898	7,330	4,423	26,967
Totals ..	801	3,213	3,701	4,364	2,747	3,331	8,328	5,064	31,549

Several tables dealing with orphanhood are given in full in Volume I of "Statistics of the Dominion of New Zealand," 1919. One of these, showing the number of issue under 16, left by married men whose deaths were registered during 1919, is summarized and given below:—

Age at Death, in Years.	Married Men who died leaving Number of Issue under 16 Years of Age shown at Head of Column.							Total Number of Married Men who died leaving Issue under Age 16.
	1	2	3	4	5	6	7 and over.	
20 and under 25 ..	2	..	..	..	..	..	..	2
25 „ 30 ..	12	6	4	..	2	..	..	24
30 „ 35 ..	22	27	9	5	2	3	1	69
35 „ 40 ..	27	38	29	13	7	3	1	118
40 „ 45 ..	38	23	27	22	16	2	5	133
45 „ 50 ..	41	38	28	13	11	5	7	143
50 „ 55 ..	49	33	17	9	7	6	3	124
55 „ 60 ..	41	20	12	8	3	2	1	87
60 „ 65 ..	49	17	3	4	1	1	1	76
65 „ 70 ..	19	14	6	3	2	..	..	44
70 „ 75 ..	17	7	2	..	..	1	..	27
75 „ 80 ..	2	1	1	..	..	..	..	4
80 and over ..	2	1	..	..	..	..	..	3
Totals ..	321	225	138	77	51	23	19	854

Infantile Mortality.

Subjoined is a classified statement of the deaths of infants under one year during 1919, with the ratio of the deaths in each class to the 1,000 births during the year:—

Sex.	Under 1 Month.	1 and under 3 Months.	3 and under 6 Months.	6 and under 12 Months.	Total under 12 Months.
Number of Deaths.					
Male	417	87	55	77	636
Female	278	71	54	69	472
Deaths per 1,000 Births.					
Male	33·13	6·91	4·37	6·12	50·53
Female	23·37	5·97	4·54	5·80	39·68

Fifty-one out of every thousand male children born and forty of every thousand females died before attaining the age of one year. The mortality was thus one in twenty of male children, and one in twenty-five of females.

It will be seen from the figures that the chances of living during the first year of age are greater for female than for male infants. Thus, in proportion to the number of children of each sex born in 1919, there were during the year—

100 deaths of males to	71	deaths of females	under 1 month of age;
100 "	86	"	from 1 to 3 months of age;
100 "	104	"	from 3 to 6 months of age;
100 "	95	"	from 6 to 12 months of age;
100 "	79	"	under 12 months of age.

Dealing with the results for ten years, the deaths of infants under one year are in the large proportion of 74 per cent. of the total deaths under five.

Deaths of Children under Five Years, and Proportion to Deaths at all Ages.

Year.	Deaths of Children under 5 Years of Age.						Total Deaths at all Ages.	Deaths under 5 Years: Per Cent. of Mortality at all Ages.
	Under 1 Year.	1 Year and under 2 Years.	2 Years and under 3 Years.	3 Years and under 4 Years.	4 Years and under 5 Years.	Total under 5 Years.		
1910 ..	1,760	253	95	76	54	2,238	9,639	23·22
1911 ..	1,484	206	122	99	69	1,980	9,534	20·77
1912 ..	1,409	157	93	45	46	1,750	9,214	18·99
1913 ..	1,653	223	104	65	54	2,099	10,119	20·74
1914 ..	1,456	199	118	80	63	1,916	10,148	18·88
1915 ..	1,394	204	125	65	80	1,868	9,965	18·75
1916 ..	1,446	261	139	132	84	2,062	10,596	19·46
1917 ..	1,360	196	132	102	89	1,879	10,528	17·85
1918 ..	1,252	275	155	129	107	1,918	16,364	11·72
1919 ..	1,108	169	121	94	81	1,573	10,808	14·55
Average of ten years	1,432	214	120	89	73	1,928	10,691	18·03

DEATHS OF INFANTS UNDER ONE YEAR, AND PROPORTION TO BIRTHS.

Year.	Deaths of Infants under 1 Year of Age.					Total Births registered.	Proportion of Deaths of Infants under 1 Year to every 1,000 Births.
	Under 1 Month	1 Month and under 3 Months.	3 Months and under 6 Months.	6 Months and under 12 Months.	Total under 12 Months.		
1910	786	298	333	343	1,760	25,984	67·73
1911	751	217	234	282	1,484	26,354	56·31
1912	827	188	192	202	1,409	27,508	51·22
1913	830	283	238	302	1,653	27,935	59·17
1914	818	241	192	205	1,456	28,338	51·38
1915	815	195	175	209	1,394	27,850	50·05
1916	770	212	228	236	1,446	28,509	50·70
1917	787	186	171	216	1,360	28,239	48·16
1918	691	226	119	216	1,252	25,860	48·41
1919	695	158	109	146	1,108	24,483	45·26
Average of ten years	777	220	199	236	1,432	27,106	52·83

The infantile-mortality rates during the last three years are the most satisfactory ever experienced in New Zealand.

The principal causes of mortality in children under one year of age, together with the numbers of deaths in New Zealand from such causes during the five years 1915–19, are given below.

DEATHS OF CHILDREN UNDER ONE YEAR.—CAUSES, 1915–19.

Causes.	Number of Deaths from each Cause.					Percentage of Total.				
	1915.	1916.	1917.	1918.	1919.	1915.	1916.	1917.	1918.	1919.
Whooping-cough	50	63	29	20	5	3·58	4·36	2·13	1·60	0·45
Convulsions ..	55	74	56	53	47	3·95	5·12	4·12	4·23	4·24
Bronchitis and pneumonia	127	123	96	102	94	9·11	8·50	7·06	8·15	8·48
Diarrhœa and enteritis	115	164	146	50	56	8·25	11·34	10·74	3·99	5·05
Malformations	132	108	120	82	112	9·47	7·47	8·82	6·55	10·11
Premature birth	397	381	380	373	317	28·48	26·35	27·94	29·79	28·62
Congenital debility	211	215	208	239	196	15·14	14·87	15·29	19·09	17·69
Other causes ..	307	318	325	333	281	22·02	21·99	23·90	26·60	25·36
Totals ..	1,394	1,446	1,360	1,252	1,108	100·00	100·00	100·00	100·00	100·00

CAUSES OF DEATH.

The classification of causes of death was made in 1908 for the first time in New Zealand according to the Bertillon Index of Diseases. This system has been adopted by the Commonwealth of Australia and the principal European and American countries. It is highly desirable for comparative purposes that uniformity of statistical method should obtain when possible.

CAUSES OF DEATH, 1919.

Class.	Number of Deaths.			Proportion to Total Deaths.			Proportion per 10,000 living.
	M.	F.	Total.	M.	F.	Total.	
				Per Cent.	Per Cent.	Per Cent.	
I. General diseases	1,505	1,353	2,858	24·25	29·41	26·44	25·15
II. Diseases of the nervous system and of the organs of special sense	658	507	1,165	10·60	11·02	10·78	10·25
III. Diseases of the circulatory system	1,097	753	1,850	17·67	16·37	17·12	16·28
IV. Diseases of the respiratory system	612	417	1,029	9·86	9·06	9·52	9·05
V. Diseases of the digestive system	308	304	612	4·96	6·61	5·66	5·39
VI. Non-venereal diseases of the genito-urinary system and annexa	301	161	462	4·85	3.50	4·27	4·07
VII. Puerperal condition	..	124	124	..	2·69	1·15	1·09
VIII. Diseases of the skin and of the cellular tissue	29	23	52	0·47	0·50	0·48	0·46
IX. Diseases of the bones and of the organs of locomotion	20	6	26	0·32	0·13	0·24	0·23
X. Malformations	86	52	138	1·39	1·13	1·28	1·21
XI. Early infancy	357	259	616	5·75	5·63	5·70	5·42
XII. Old age	593	463	1,056	9·55	10·06	9·77	9·29
XIII. External violence	574	146	720	9·25	3·17	6·66	6·34
XIV. Ill-defined causes	67	33	100	1·08	0·72	0·93	0·88
Totals	6,207	4,601	10,808	100·00	100·00	100·00	95·11

The next table shows the number of deaths from certain principal causes for the five years 1915-1919.

Cause.	Number of Deaths.					Proportion per 10,000 of Mean Population.				
	1915.	1916.	1917.	1918.	1919.	1915.	1916.	1917.	1918.	1919.
Typhoid fever	52	37	41	33	34	0·47	0·34	0·37	0·30	0·30
Measles	64	93	17	15	3	0·58	0·85	0·15	0·14	0·03
Scarlet fever	44	52	30	30	23	0·40	0·47	0·27	0·27	0·20
Whooping-cough	80	98	44	27	7	0·73	0·89	0·40	0·24	0·06
Diphtheria	99	163	237	180	149	0·90	1·48	2·16	1·71	1·31
Influenza	110	73	38	5 516	346	1·00	0·66	0·35	50·01	3·04
Pulmonary tuberculosis	562	591	597	664	602	5·11	5·38	5·43	6·02	5·30
Other forms of tuberculosis	131	141	158	168	160	1·19	1·28	1·44	1·52	1·41
Cancer	900	909	957	936	1,031	8·19	8·27	8·71	8·49	9·07
Diabetes	148	154	144	195	168	1·35	1·40	1·31	1·77	1·48
Exophthalmic goitre	31	27	37	42	25	0·28	0·25	0·34	0·38	0·22
Anæmia, chlorosis	69	99	104	82	75	0·63	0·90	0·95	0·74	0·65
Meningitis	138	160	166	182	155	1·26	1·54	1·51	1·65	1·36
Infantile paralysis	3	123	10	4	..	0·03	1·12	0·09	0·04	..
Apoplexy, cerebral hæmorrhage	403	478	472	470	539	3·68	4·35	4·29	4·26	4·74
Epilepsy	49	51	56	61	49	0·45	0·46	0·51	0·55	0·13
Convulsions of children under 5 years of age	77	105	62	70	61	0·70	0·95	0·56	0·63	0·54
Organic heart-disease	1,144	1,269	1,390	1,469	1,538	10·41	11·54	13·32	13·32	13·53
Arteriosclerosis	79	87	71	83	..	0·72	0·79	0·65	0·75	..
Embolism, thrombosis	52	75	62	53	78	0·47	0·68	0·56	0·48	0·69
Bronchitis	283	240	225	304	290	2·57	2·18	2·05	2·76	2·55
Broncho-pneumonia	136	127	121	200	140	1·24	1·15	1·10	1·81	1·23
Pneumonia	300	320	262	449	401	2·73	2·91	2·38	4·07	3·53
Gastritis	37	37	51	38	..	0·34	0·31	0·46	0·31	..
Diarrhœa and enteritis	244	302	306	147	132	2·22	2·75	2·78	1·33	1·16
Appendicitis and typhlitis	94	90	101	92	88	0·86	0·82	0·92	0·83	0·77
Hernia, intestinal obstruction	86	116	46	96	79	0·78	1·05	0·42	0·87	0·70
Cirrhosis of liver	51	53	33	41	40	0·46	0·48	0·30	0·37	0·35
Simple peritonitis	42	37	46	45	57	0·38	0·34	0·42	0·41	0·50

Cause.	Number of Deaths.					Proportion per 10,000 of Mean Population.				
	1915.	1916.	1917.	1918.	1919.	1915.	1916.	1917.	1918.	1919.
Nephritis, Bright's disease	267	304	271	287	309	2·43	2·76	2·46	2·69	2·72
Cystitis	28	51	49	26	..	0·25	0·46	0·45	0·24	..
Diseases and accidents of puerperal condition	131	167	169	134	124	1·19	1·52	1·54	1·21	1·09
Malformations	153	127	133	112	138	1·39	1·15	1·21	1·02	1·21
Congenital debility ..	217	222	208	239	196	1·97	2·02	1·89	2·17	1·72
Premature birth ..	397	381	381	373	317	3·61	3·47	3·47	3·38	2·79
Senility	703	883	1,001	1,229	1,056	7·21	8·03	9·11	11·14	9·29
Violence (1) suicide ..	113	147	124	113	139	1·03	1·34	1·13	1·02	1·22
(2) accident &c.	623	595	561	548	581	5·67	5·41	5·10	4·97	5·11
Other causes	1,735	1,603	1,747	1,602	..	15·76	14·59	15·89	14·52	..
Totals	9,965	10,596	10,528	16,364	10,808	90·64	96·37	95·77	148·36	95·11

TUBERCULOSIS.

Pulmonary tuberculosis takes fourth place in point of the number of deaths resulting therefrom during 1919, ranking after heart-disease, senility, and cancer in that order. Acute miliary tuberculosis is included with pulmonary. The average for the past ten years was 598, or 5·58 per 10,000.

Year.	Deaths from Pulmonary Tuberculosis.	Rate per 10,000.	Year.	Deaths from Pulmonary Tuberculosis.	Rate per 10,000.
1910 ..	582	5·86	1915 ..	562	5·11
1911 ..	584	5·75	1916 ..	591	5·38
1912 ..	567	5·46	1917 ..	597	5·43
1913 ..	656	6·14	1918 ..	664	6·02
1914 ..	576	5·28	1919 ..	602	5.30

The mortality-rate from all forms of tuberculosis has also exhibited a very satisfactory decline for many years. Ten years' figures are quoted.

DEATHS AND DEATH-RATES FROM TUBERCULOSIS, AND PERCENTAGE OF TOTAL DEATHS, 1910–19.

Year.	Mean Population.	Number of Deaths from Tubercular Diseases.	Rate per 1,000.	Percentage of Total Deaths from all Causes.
1910 ..	992,802	731	7·36	7·58
1911 ..	1,014,896	738	7·27	7·74
1912 ..	1,039,016	716	6·89	7·77
1913 ..	1,068,644	812	7·60	8·02
1914 ..	1,090,328	728	6·67	7·17
1915 ..	1,099,394	693	6·30	6·95
1916 ..	1,099,449	742	6·74	7·00
1917 ..	1,099,117	755	6·87	7·17
1918 ..	1,103,022	832	7·54	5·08
1919 ..	1,136,389	762	6·71	7·05

Tuberculosis claims its victims at comparatively early age. Of those dying from this cause in 1919, persons under the age of twenty years formed 20 per cent. and those under forty years 69 per cent.

The New Zealand rate of deaths from tubercular diseases, as well as those of the Australian States, compares very favourably with those of England, Scotland, and Ireland, which have, however, also decreased considerably of late years.

DEATH-RATES FROM TUBERCULOSIS, AND PERCENTAGE OF TOTAL DEATHS, 1917.

	Death-rates (per 1,000) from Tuberculosis.	Percentage of Total Deaths.
England and Wales*	1·62	11·21
Scotland †	1·63	9·58
Ireland †	2·20	12·50
Queensland	0·50	5·20
New South Wales	0·61	6·36
Victoria	0·79	7·63
South Australia	0·95	9·37
Western Australia	0·77	8·63
Tasmania	0·59	6·67
Commonwealth	0·69	7·00
New Zealand	**0·69**	**7·17**

* Civilians only. † Year 1915.

CANCER.

This disease is annually responsible for more deaths in New Zealand than can be assigned to any cause other than organic disease of the heart.

In 1919 there were 1,031 deaths from cancer in the Dominion, a proportion of 9·07 per 10,000 persons. This number is the highest yet recorded, an unenviable distinction which almost every year in succession attains. Rates for war years are inflated to some extent by the absence of a large number of young men who are comparatively immune from cancer.

The average number of cancer deaths and the average cancer death-rate for the years 1914–18 were 947 and 8·55 respectively. Deaths of males during 1919 numbered 543, and of females 488.

NUMBER OF PERSONS WHO DIED FROM CANCER, THE PROPORTION PER 10,000 PERSONS LIVING, AND THE PERCENTAGE OF ALL DEATHS, 1910–19.

Year.	Deaths from Cancer.	Total Deaths, all Causes.	Deaths from Cancer per 10,000 of Living Persons.	Deaths from Cancer per 100 of all Deaths.
1910	742	9,639	7·47	7·70
1911	809	9,534	7·97	8·49
1912	812	9,214	7·82	8·81
1913	856	10,119	8·01	8·46
1914	904	10,148	8·29	8·91
1915	900	9,965	8·19	9·03
1916	909	10,596	8·27	8·50
1917	957	10,528	8·71	9·09
1918	936	16,364	8·49	5·72
1919	1,031	10,808	9·07	9·54

The parts of the body most commonly affected are the stomach and liver. Among females the generative and mammary organs are frequently the seat of the disease. Full details of location are published in Volume I of the "Statistics of the Dominion of New Zealand," 1919.

CANCER: SEAT OF DISEASE, 1919.

Seat of Disease.	Males.	Females.	Total.
Buccal cavity	43	10	53
Stomach and liver	227	130	357
Peritoneum, intestines, rectum	101	81	182
Female genital organs	..	84	84
Breast	..	63	63
Skin	19	6	25
Other organs or organs not specified ..	153	114	267
Totals	543	488	1,031

Eighty-nine per cent. of the deaths from cancer during 1919 were at the ages 45 years and upwards, and 61 per cent. at the ages 60 years and upwards.

Exhaustive statistical inquiry for the period 1872–1919 has shown that in New Zealand death from cancer is, on the average, now occurring later in life than formerly. It would seem that this is the case even if allowance be made for the fact that the age-constitution of the Dominion is increasing—*i.e.*, that the average citizen of New Zealand is now older than the average citizen of ten, twenty, or fifty years ago.

PUERPERAL ACCIDENTS AND DISEASES.

The deaths certified to these causes in 1919 numbered 124, as against 134 in 1918. Included in the number in 1919 were: Accidents of pregnancy, 9; puerperal hæmorrhage, 10; other accidents of labour, 11; puerperal septicæmia, 52; puerperal albuminuria, 36. The number of deaths to every 1,000 confinements (where children were born alive) for each ten years is shown.

Year.	Deaths of Mothers to every 1,000 Confinements.	Year.	Deaths of Mothers to every 1,000 Confinements.
1910	4·55	1915	4·76
1911	4·38	1916	5·93
1912	3·73	1917	6·05
1913	3·62	1918	5·24
1914	4·22	1919	5.12

The higher rate of puerperal accidents and diseases shown since 1915 as compared with preceding years is largely, perhaps wholly, accounted for by the fact that during the past four years in all cases possible where a woman of child-bearing age was shown as having died of septicæmia, peritonitis, convulsions, &c., steps were taken to ascertain whether the disease was puerperal.

Maori Deaths.

The following table shows the numbers of Maoris registered under section 20 of the Births and Deaths Registration Amendment Act, 1912, since its coming into force. The numbers registered under the main Act are also given.

Year.	Under Section 20 of Births and Deaths Registration Amendment Act, 1912.			Under Main Act.
	Males.	Females.	Totals.	Totals.
1913	*	*	412	61
1914	382	341	723	42
1915	424	362	786	31
1916	432	329	761	47
1917	382	347	729	44
1918	1,000	937	1,937	99
1919	631	563	1,194	69

* Not shown separately.

Maoris suffered exceedingly severe losses during the influenza epidemic of 1918. As statistics of causes of deaths are not compiled in their case, the exact totals cannot be ascertained, but it is estimated that at least 1,500 perished. This represents a rate of 30 per 1,000 of the Maori population, or over five times the "European" death-rate in the epidemic.

These deaths are not included in the numbers quoted elsewhere in this subsection.

Deaths in Cook Islands.

As explained in the Births subsection of this book, a system of compulsory registration of deaths is now ruling in the Cook Islands.

The following figures of deaths during the year ended 31st March, 1920, are supplied by the Cook Islands Department.

Islands.	Number of Deaths.	Islands.	Number of Deaths.
Rarotonga	89	Rakahanga	10
Aitutaki	43	Atiu	29
Mangaia	40	Penrhyn	2
Manihiki	10	Pukapuka (no returns)	..
Mauke	10	Niue	126*
Mitiaro	2	Total	361

Note.—In some cases the figures quoted above are for the calendar year 1919 or other periods.

SECTION II.—VITAL STATISTICS—*continued.*

SUBSECTION D.—MORBIDITY.

In comparisons of healthiness based on death-rates, the effect of the advance of medical science in recent years is not taken into account. It is common knowledge that many diseases regarded a few decades ago as incurable now give a fair percentage of recoveries. Again, many diseases seldom or never result fatally.

In New Zealand the only records of this nature beyond that of fatality are the returns of infectious diseases notified and discharges from public hospitals.

MONTHLY INCIDENCE OF INFECTIOUS DISEASES ACCORDING TO NOTIFICATIONS RECEIVED UNDER SECTION 25 OF THE PUBLIC HEALTH ACT DURING THE YEAR ENDED 31ST DECEMBER, 1919.

Month.	Scarlet Fever.	Diphtheria.	Enteric Fever.	Tuberculosis.	Cerebro-spinal Meningitis.	Poliomyelitis.	Puerperal Septicæmia.	Hydatids.	Ophthalmia Neonatorum.	Septicæmia (unclassified).	Erysipelas.	Measles.	Lethargic Encephalitis.	Influenza.	Pneumonia.	Trachoma.	Anthrax.	Totals.
Jan. ..	79	159	20	74	16	1	3	3	2	..	4	21	..	366	..	1	..	749
Feb. ..	69	166	26	84	2	2	8	2	3	..	4	6	..	76	..	..	..	448
March ..	80	249	41	107	2	..	6	4	4	2	8	16	..	133	..	..	..	652
April ..	145	333	47	70	7	1	5	3	2	3	5	5	..	395	..	..	..	1,021
May ..	172	409	46	71	13	1	2	1	1	1	4	28	6	284	..	..	..	1,039
June ..	172	381	37	75	9	3	5	6	2	1	7	10	39	136	29	..	..	912
July ..	152	353	58	83	10	..	9	2	2	3	8	13	20	200	80	..	..	993
Aug. ..	148	330	43	95	12	..	9	4	1	1	11	18	7	316	113	..	..	1,108
Sept. ..	138	291	44	71	9	2	5	5	..	2	8	62	13	256	154	2	..	1,062
Oct. ..	126	305	60	88	9	..	4	6	2	..	2	76	3	197	118	..	..	996
Nov. ..	153	265	30	95	4	..	11	4	1	1	6	113	2	528	199	4	1	1,417
Dec. ..	87	258	25	71	3	1	12	5	4	..	6	109	..	813	186	..	..	1,580
Totals ..	1,521	3,499	477	984	96	11	79	45	24	14	73	477	90	3,700	879	7	1	11,977

Nearly 60 per cent. of the notifications were for diphtheria and influenza. The great majority of influenza cases were of a very mild type. A quinquennial summary of the principal diseases only is as follows:—

PRINCIPAL INFECTIOUS DISEASES NOTIFIED DURING THE PAST FIVE YEARS.

Disease.	1915.	1916.	1917.	1918.	1919.
Scarlet fever	2,312	4,278	2,755	1,654	1,521
Diphtheria	1,420	2,376	5,458	5,539	3,499
Enteric fever	825	806	653	423	477
Tuberculosis	1,019	950	1,521	1,072	984
Cerebro-spinal meningitis ..	85	135	42	159	96
Poliomyelitis	10	1,018	54	6	11

Public Hospitals: Admissions and Discharges.

The total admissions to public hospitals (other than St. Helens' Maternity Homes) in New Zealand during 1919 numbered 42,917. There were 2,895 patients in hospital at the beginning of the year, the total cases dealt with during the year being thus 45,812, equal to 386 per 10,000 of mean population, including Maoris. The total number of persons treated is somewhat less than the number of cases, each admission being counted a separate case.

Of the 45,812 cases, 26,321 were discharged as recovered, including a number of tuberculosis cases in which the patient was described as able to work or as having had the disease arrested. In 11,385 cases the patient was discharged relieved, and in 1,906 cases as unrelieved. Deaths in hospital numbered 2,864, or 6·25 per cent. of cases dealt with. end of the year. There are 65 public general hospitals, 4 fever or infectious-diseases hospitals, and 6 sanatoria for consumptives.

Ages of Patients.

The ages of patients discharged from or dying in public hospitals during 1919 and 1918 are as shown in the following summary:—

Public Hospitals.—Ages of Patients discharged or dying.

Ages of Patients, in Years.	1919.			1918.		
	Males.	Females.	Total.	Males.	Females.	Total.
Under 5	2,046	1,461	3,507	2,208	1,775	3,983
5 and under 10 ..	2,288	1,890	4,178	2,571	2,199	4,770
10 „ 15 ..	1,693	1,281	2,974	1,851	1,508	3,359
15 „ 25 ..	4,659	3,174	7,833	4,793	4,125	8,918
25 „ 35 ..	5,676	3,468	9,144	5,405	4,483	9,888
35 „ 45 ..	3,664	2,517	6,181	3,992	2,657	6,649
45 „ 55 ..	2,356	1,173	3,529	2,539	1,259	3,798
55 „ 65 ..	1,520	671	2,191	1,513	648	2,161
65 and over	2,262	677	2,939	2,166	648	2,814
Unspecified	..	..	..	81	75	156
Totals ..	26,164	16,312	42,476	27,119	19,377	46,496

Summary of Diseases, etc.

The Bertillon system of classification of diseases and causes of death divides such into fourteen well-defined classes, which are further subdivided into 189 orders. The table following shows that Class I, "General diseases," is first on the list as regards both discharges and deaths. Diseases of the digestive system come next in point of numbers, but the death-rate is low. External causes come third on the list, and here again the death-rate is low, owing to the preponderance of simple fractures, cuts, bruises, &c.

PUBLIC HOSPITALS.—CLASSIFICATION OF DISEASES, 1919.

Class.	Discharges.			Deaths.		Total Discharges and Deaths.	
	Recovered.	Relieved.	Unrelieved.	Males.	Females.	Males.	Females.
I. General diseases ..	5,847	2,235	603	600	377	5,685	3,977
II. Diseases of the nervous system and of the organs of special sense	923	1,153	327	220	114	1,700	1,037
III. Diseases of the circulatory system	819	786	77	232	90	1,427	577
IV. Diseases of the respiratory system	3,779	1,206	97	225	86	3,295	2,098
V. Diseases of the digestive system	5,289	1,311	122	154	112	3,968	3,020
VI. Diseases of the genito-urinary system and annexa	2,016	834	119	130	45	1,045	2,099
VII. Puerperal condition ..	1,229	151	32	..	47	..	1,459
VIII. Diseases of the skin and of the cellular tissue	1,225	473	48	25	11	1,271	511
IX. Diseases of the organs of locomotion	797	612	59	16	3	1,096	391
X. Malformations ..	239	67	27	10	4	281	66
XI. Diseases of early infancy	26	14	1	22	15	48	30
XII. Old age	23	97	98	92	25	280	55
XIII. External causes ..	3,792	2,293	259	153	40	5,758	779
XIV. Ill-defined causes ..	317	153	37	5	11	310	213
Totals	26,321	11,385	1,906	1,884	980	26,164	16,312

More detailed information concerning certain of the principal diseases and groups of diseases is given in the following pages. The "Statistics of the Dominion of New Zealand" (Volume I) contain detailed information for each hospital.

EPIDEMIC GENERAL DISEASES.

A table of the epidemic general diseases dealt with in public hospitals during 1919 is given. The figures in this and following tables throughout this subsection deal with the discharges and deaths only, and not with patients remaining in hospital at the end of the year, who will be included in the figures for 1920 or such other year of discharge or death.

PRINCIPAL EPIDEMIC GENERAL DISEASES, 1919.

Disease.	Discharges.			Deaths.		Total Discharges and Deaths.	
	Recovered.	Relieved.	Unrelieved.	Males.	Females.	Males.	Females.
Typhoid fever	176	6	3	11	7	121	82
Malaria	77	127	..	1	..	204	1
Measles	70	1	..	1	1	42	31
Scarlet fever	731	22	38	7	10	307	501
Whooping-cough ..	7	7	..	..	..	6	8
Diphtheria	2,028	76	8	54	55	1,003	1,218
Croup	10	..	..	..	1	8	3
Influenza	888	94	9	42	22	680	375
Dysentery	24	13	1	1	..	34	5
Erysipelas	46	7	..	1	5	28	31
Chicken-pox	81	3	1	1	..	20	15
Mumps..	11	5	1	..	..	82	5
German measles.. ..	..	..	1	..	..	5	7
Other diseases	2	5	1	..	..	7	1
Totals	4,181	366	63	119	101	2,547	2,283

The rate of mortality of this group is normally very low, between 2 and 3 per cent. In 1919 the mortality rate was 4·55 per cent., due principally to the influenza cases, an aftermath of the epidemic.

TUBERCULOSIS.

Tuberculosis occupies eight orders in the classification of diseases, but is usually divided into two groups—viz., pulmonary tuberculosis and other forms of tuberculosis. Pulmonary tuberculosis, with which is included tuberculosis (undefined) and acute miliary tuberculosis, comprises 72 per cent. of the total of 1,511 cases of tubercular diseases, and the same percentage of the deaths.

TUBERCULOSIS CASES IN HOSPITALS, 1919.

Form of Tuberculosis.	Discharges.			Deaths.		Total Discharges and Deaths.	
	Recovered.	Relieved.	Unrelieved.	Males.	Females	Males.	Females
Tuberculosis of lungs ..	126	523	205	149	84	751	336
Acute miliary tuberculosis ..	..	..	..	4	3	4	3
Tuberculous meningitis ..	1	2	4	29	12	31	17
Abdominal tuberculosis ..	20	31	9	7	7	31	43
Pott's disease	18	50	13	5	5	64	27
White swellings	35	76	13	4	4	86	46
Tuberculosis of other organs	96	131	23	7	7	165	99
Disseminated tuberculosis ..	1	..	1	4	2	5	3
Totals	297	813	268	209	124	1,137	574

Five sanatoria for the treatment of tuberculosis cases are situated in suitable districts throughout the Dominion.

Venereal Diseases.

In order to obtain some definite information regarding the so-called "social diseases," a questionnaire was attached in 1919 to the hospital discharge cards used in the preparation of statistical tables, requiring completion in all cases where the disease treated was due to one form or other of venereal disease. Of 42,476 patients discharged from or dying in public hospitals in 1919, some 234 suffered from effects of syphilis and 339 from effects of gonococcal infection. Some of the results obtained are as tabulated below:—

How infection contracted.	Recovered.		Relieved.		Unrelieved.		Died.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.
Origin Syphilitic.										
Congenitally ..	3	3	10	10	3	1	4	2	20	16
Sexual intercourse ..	12	4	44	19	14	2	6	..	76	25
Mouth infection ..	..	..	2	..	..	..	..	..	2	..
Otherwise	..	1	1	..	1	..	..	..	2	1
Not known or not stated	11	8	44	11	13	1	4	..	72	20
Total ..	26	16	101	40	31	4	14	2	172	62
Origin Gonococcal.										
At birth	2	5	2	1	..	..	1	..	5	6
Sexual intercourse ..	62	54	81	18	10	3	2	1	155	76
By contact	..	1	..	..	..	..	..	..	..	1
Contact with infected clothes, towels, &c.	..	2	..	2	..	..	..	..	..	4
Otherwise	2	8	3	4	..	..	..	..	5	12
Not known or not stated	16	19	20	14	1	4	..	1	37	38
Total ..	82	89	106	39	11	7	3	2	202	137
Grand total ..	108	105	207	79	42	11	17	4	374	199

Another portion of the questionnaire concerned itself with the present communicability of the disease, and the opinions of the medical practitioners in charge of the cases were as follows:—

Was Disease communicable at Date of Discharge?	Origin Syphilitic.		Origin Gonococcal.	
	No.	Per Cent.	No.	Per Cent.
Yes	47	20·09	105	30·97
Probably	4	1·71	16	4·72
Possibly	2	0·86	7	2·05
Probably not	2	0·86	1	0·30
No	89	38·03	163	48·08
Patient dead	16	6·84	5	1·50
Not known or not stated ..	74	31·61	42	12·38
	234	100·00	339	100·00

Cancer.

The total number of deaths in public hospitals in 1919 where cancer was assigned as the cause was 279 (males 186, females 93). In addition

160 patients treated for cancer were discharged as recovered, 216 as relieved, and 171 as unrelieved. Very few of the recoveries were in cases of internal cancer, and but a small proportion of the deaths in cases of surface cancer. It is noticeable that with but six exceptions cancer of the mouth and its annexa was confined to males. Cancer of the stomach, liver, &c., and of the skin are also pre-eminently male diseases.

CANCER CASES.—DISCHARGES FROM AND DEATHS IN PUBLIC HOSPITALS, 1919.

Seat of Disease.	Discharges.						Deaths.	
	Recovered.		Relieved.		Unrelieved.			
	Males.	Females	Males.	Females	Males.	Females	Males.	Females
Buccal cavity ..	38	1	20	2	20	1	21	2
Stomach, liver, &c. ..	2	2	24	7	35	11	69	22
Intestines, rectum, &c.	..	9	27	11	15	8	33	14
Female genital organs	..	8	..	35	..	19	..	23
Breast	..	52	..	31	..	11	..	10
Skin	8	4	17	2	7	2	9	1
Other organs (including unspecified)	25	11	20	20	29	13	54	21
Totals ..	73	87	108	108	106	65	186	93

Of the 279 patients who died in hospitals from cancer during 1919, 142, or more than half, had been in hospital less than one month, and of these 53 died within one week of admission.

PUERPERAL CONDITION.

A total of 1,459 cases come under the heading of puerperal. This number includes 393 cases of normal childbirth dealt with at public general hospitals, but does not cover maternity cases in St. Helens Hospitals.

PUERPERAL ACCIDENTS, ETC.

Disease.	Discharges.			Deaths.	Total Discharges and Deaths.
	Recovered.	Relieved.	Unrelieved.		
Miscarriage	207	37	1	2	247
Abortion	289	33	..	..	322
Ectopic gestation	66	8	1	2	77
Persistent vomiting ..	22	4	..	..	26
Hyperemesis gravidarum ..	13	3	1	..	17
Other accidents of pregnancy	26	10	6	..	42
Normal labour	377	9	7	..	393
Puerperal hæmorrhage ..	34	9	2	..	45
Ruptured perinæum ..	27	2	1	..	30
Other accidents of labour ..	36	10	6	3	55
Puerperal septicæmia ..	99	13	..	27	139
Puerperal eclampsia ..	17	2	..	11	30
Other	16	11	7	2	36
Totals	1,229	151	32	47	1,459

Other Diseases.

Of remaining diseases dealt with, a number of the more important or more frequently occurring are shown in tabulated form.

Bertillon No.	Disease, &c.	Discharges.			Deaths.	Total Discharges and Deaths.	
		Recovered.	Relieved.	Unrelieved.		Males.	Females.
47, 48	Rheumatism	307	233	23	12	363	212
50	Diabetes	21	58	14	42	67	68
51	Exophthalmic goitre	33	39	4	11	12	75
54	Anæmia, chlorosis	27	39	4	19	37	52
56	Alcoholism	194	81	6	12	267	26
61	Meningitis	54	13	6	96	107	62
64	Apoplexy, cerebral hæmorrhage ..	12	23	9	118	117	45
..	Neurasthenia	90	169	30	..	167	122
75	Diseases of eyes	266	334	50	1	404	247
76	Diseases of ears	117	81	10	..	123	85
79	Organic heart-disease	93	485	37	257	658	214
81	Diseases of arteries, &c. ..	3	24	8	18	44	9
83	Diseases of veins, &c.	433	136	17	2	407	181
88	Diseases of thyroid body ..	117	54	10	2	29	154
89, 90	Bronchitis	393	201	10	52	475	181
91	Broncho-pneumonia	143	14	1	43	114	87
92	Pneumonia	656	72	4	151	589	294
93	Pleurisy	362	154	6	27	401	148
96	Asthma	75	104	6	11	131	65
..	Tonsils	801	149	6	2	516	442
..	Gastritis	248	167	7	4	292	134
104, 105	Diarrhœa and enteritis ..	354	101	5	28	313	175
108	Appendicitis	1,957	165	12	63	1,057	1,140
109	Hernia, &c.	785	159	24	43	806	205
111–115	Diseases of liver	203	93	12	31	122	217
117	Peritonitis	52	34	6	27	52	67
119, 120	Nephritis, Bright's disease ..	76	101	9	82	178	90
124	Diseases of bladder	121	109	12	24	155	111
128–130	Diseases of uterus	940	215	46	14	..	1,215
131	Diseases of ovary	98	17	3	2	..	120
132	Diseases of female genital organs	128	37	4	..	..	169
..	Osteomyelitis	79	81	8	10	137	41
..	Synovitis	104	42	5	..	117	34
160–3	Violence (1) suicides	10	7	1	2	16	4
164–186	Violence (2) accident	3,782	2,286	258	191	5,742	775

SECTION III.—PUBLIC HEALTH, HOSPITALS, ETC.

SUBSECTION A.—PUBLIC HEALTH.

Public Health Act.

Legislation on the subject of public health is contained principally in the Public Health Act, 1908, and its amendments in 1910 and 1918.

The 1918 amendment was passed largely as the result of experience gained during the influenza epidemic which visited New Zealand in the last three months of the year 1918. Its principal object was the provision of necessary powers to enable the Public Health Department to take more vigorous action in combating an epidemic. It also provided for the creation of a Board of Public Health, consisting of ten members, whose duty it is to report to the Minister of Health on matters concerning developments in national health, medical service, instruction in health questions, and desirable legislative reforms. Further power is given to the Minister of Health to create District Advisory Committees in any health district when required. Provision is also made for any local authority to establish lodginghouses within the area of its jurisdiction, or contiguous thereto, the money for the purchase of the necessary land and buildings being obtainable by loan under the Local Bodies' Loans Act. In regard to buildings in a condition unfit for occupation or dangerous to public health, the local authority may, upon the certificate of the District Health Officer, require the owner to have the premises pulled down, or, as an alternative, the District Health Officer may require structural alterations or additions made to the buildings or improvements to the sanitary conditions. In order to prevent overcrowding in lodginghouses and tenements, no person is allowed to accommodate more than five lodgers at any time, for either temporary or permanent board and residence, unless the premises have been licensed by the local governing authority; nor can the owner let any house or tenement in which more than one family is to reside, or any room for the occupation of more than two persons, without the previous approval of the local authority. To secure adequate medical services in the outlying districts power is given to the Minister, on receiving an application from a local authority, to provide a resident medical practitioner, whose salary and emoluments shall be fixed, and who will not be debarred from holding Government appointments connected with matters of public health in his district.

Vaccination.

The law in this connection makes vaccination of children compulsory, but provides for exemption if the parent or custodian of a child has conscientious objections. Comparatively few children are now vaccinated.

Registration of Medical Practitioners.

Under the Medical Practitioners Act, 1914, is constituted the Medical Board of New Zealand, consisting of the Inspector-General of Hospitals and six other registered medical practitioners.

It is a serious offence for a person to carry on the practice of medicine unless he is registered under the Act. The register is kept by the Registrar-General. The Medical Board deals with all applications for registration, considering not only professional qualifications, but other attendant circumstances also. To be qualified for registration a person must be a graduate in medicine of the University of New Zealand, or eligible for registration in the United Kingdom, or hold the diploma of an approved foreign institution after a course of not less than five years' study of medical or surgical subjects.

Applicants who are refused registration have the right of appeal to the Supreme Court. Application for registration should be made in the first place to the Registrar of Births and Deaths at Auckland, Wellington, Christchurch, or Dunedin. The fee for registration is £3 3s., payable on deposit of evidence of qualification. The number on the register at 31st December, 1919, was 1,015.

Registration of Dentists.

Application for registration as a dentist should be made to the Registrar-General, Wellington, accompanied by a fee of £1.

Every adult person is entitled to be registered as a dentist in New Zealand who is the holder of a degree in dental surgery of the University of New Zealand, or a certificate of proficiency in dentistry obtained from the Senate of the University, or is registered or entitled to be registered as a dentist in the United Kingdom, or is the holder of such degree in dentistry granted in a British possession or a foreign country as may be recognized by the Senate of the New Zealand University. Evidence of good character is required in every case. The number on the register at 31st December, 1919, was 751.

Sale of Food and Drugs.

The Sale of Food and Drugs Act is administered by the officers of the Public Health Department, and provides for the analysis, by public analysts, of any article of food or drink, or of any drug, which may be sold, offered for sale, or exposed for sale, and for the inspection of any place where there is any food or drug intended for sale. If any such article be proved to be unfit for human consumption, or likely to cause injury to health if consumed, heavy penalties may be inflicted on the person or persons responsible.

During the year 1919, 144 charges under the Sale of Food and Drugs Act were dealt with in the Magistrates' Courts, resulting in 108 convictions. Fines were imposed in 102 cases, and in six cases the defendant was convicted and discharged. One hundred of the convictions were in connection with the sale of adulterated milk, twenty-one for selling light-weight bread, and eight for selling light-weight or over-watered butter.

In 1919, 2,489 samples were taken by the Department, 2,135 being milk-samples. Samples of bread to the number of 3,197 were weighed, and 380 of these were found to be short-weighted. Of 1,579 butter-samples weighed, thirty-five were non-complying. The total fines and costs where legal proceedings resulted from sampling or weighing, &c., amounted to £1,048 for the year.

Registration of Plumbers.

The Plumbers Registration Act, passed during the session of 1912, provided for the setting-up of a Board, to be called the Plumbers' Board of New Zealand. The functions of the Board are to decide what persons may be registered under the Act, in what districts sanitary plumbing shall be performed only by registered plumbers, and what shall be the scope of the examinations to be held in the future as a part of the process of securing registration.

The total number of plumbers entered on the register to date is 1,295.

SUBSECTION B.—HOSPITALS AND CHARITABLE INSTITUTIONS.

Expenditure on Hospitals and Charitable Aid.

The year 1918–19 is the third year for which official statistics of Hospital and Charitable Aid Boards have been prepared on the basis of an Income and Expenditure Account and Balance-sheet. The results arrived at are the products of the application of the uniform system of accounts which has been adopted in several countries abroad, and these are thus comparable with those of many other countries.

On account of the fact that the figures furnished in the following tables for this Dominion prior to the year 1916–7 were compiled on a basis of receipts and payments and not of income and expenditure, the amounts in some points are not strictly comparable with those for the last three years.

Hospital and Charitable-aid Income.

The total gross income of Hospital Boards, separate institutions, and Government institutions for the year ended 31st March, 1919, was £1,213,815, and for Hospital Boards alone was £1,161,669.

The main sources of income for the year were as follow:—

	£
Contributable by Government	302,666
Levies on local authorities	264,063
Voluntary contributions	17,620
Fees payable by those assisted	349,172*
Fees payable on account of patients by Hospital and Charitable Aid Boards, separate institutions, and Government (*inter se*)	3,680
Charitable-aid recoveries	
Rents, interests, and dividends	19,255
Miscellaneous income	19,295

* Exclusive of fees paid by Hospital and Charitable Aid Boards or separate institutions.

Expenditure.

The total gross expenditure of Hospital Boards, separate institutions, and Government institutions amounted during the year to £1 213,815, the expenditure of Hospital Boards alone being £1,161,669. The net expenditure—

i.e., the gross expenditure less the excess of income over expenditure—was £939,828. The following are the main items of expenditure by all authorities :—

	£
Hospital maintenance	547,649
Charitable aid	136,177
Public health	33,700
Administration	14,330
Reductions in patients' fees and amounts written off	151,716

Hospital-maintenance Expenditure.

The average annual cost of maintenance per occupied bed for the last five years is set out below :—

Year.	Provisions.	Surgery and Dispensary.	Domestic and Establishment.	Salaries and Wages.	Total Maintenance.
	£	£	£	£	£
1914–15	25·0	10·7	27·0	43·5	106·2
1915–16	27·4	10·4	31·1	42·5	111·3
1916–17	28·7	10·3	27·1	43·7	109·6
1917–18	30·7	11·8	33·8	41·8	118·1
1918–19	35·9	12·8	39·0	48·0	135·7

Charitable-aid Expenditure.

The charitable-aid expenditure for the last five years has been as follows :—

Year.	Indoor Relief.	Outdoor Relief.	Total.
	£	£	£
1914–15	74,081	37,413	111,494
1915–16	84,269	40,349	124,618
1916–17	72,524	41,119	113,643
1917–18	91,092	44,006	135,098
1918–19	82,713	53,464	136,177

Hospital and Charitable-aid Expenditure.

Year ended 31st March.	Mean Population.	Hospital and Charitable Aid and other Expenditure.	Expenditure per Head of Mean Population.
		£	s. d.
1915	1,095,206	578,838	10 6¾
1916	1,100,496	631,504	11 5¾
1917	1,099,449	603,081	10 11¾
1918	1,114,706	716,059	12 10¼
1919	1,136,390	947,171	16 8

The above figures include infectious-diseases hospitals and consumptive sanatoria under Boards' control, also public-health expenditure and subsidies to medical associations and district nurses. Since 1916–17 the figures are statements of expenditure incurred, not of actual payments made as in pre-

vious years. The number of persons availing themselves of treatment in the general hospitals for the last five years has been as follows:—

Year.	Total Number of Persons under Treatment.	Mean Population.	Proportion under Treatment per 1,000 of Population.	Average Number of Occupied Beds per Diem.	Proportion per 1,000 of Population.
1914–15	31,366	1,095,206	28·6	2,364	2·16
1915–16	36,477	1,100,496	33·1	2,617	2·38
1916–17	39,029	1,099,449	35·5	2,972	2·73
1917–18	40,232	1,114,706	36·1	3,190	2·86
1918–19	50,112	1,136,390	44·1	3,653	3·21

The general hospitals, numbering sixty-five in 1918–19, covered by the above table include five hospitals which are also old people's homes, as well as two institutions—the Mercury Bay and Oamaru Hospitals—which are not under the control of Hospital Boards. The figures given do not cover maternity hospitals or special hospitals for infectious diseases or tuberculosis.

Public Hospitals.

Information as to the number of public general hospitals and their staff and accommodation is given for each of the past five years.

Number of	Year ended 31st March.				
	1915.	1916.	1917.	1918.	1919.
Institutions	65	65	65	64	65
Medical staff (stipendiary)	100	115	112	114	123
Nursing staff—					
Trained nurses	281	260	248	293	292
Probationers	647	764	833	864	900
Domestic staff	623	675	600	..	771
Beds	3,531	3,832	4,075	4,191	4,616

Further particulars concerning the public general hospitals of the Dominion for the years ended the 31st March, 1918 and 1919, are given in the next table:—

	Year ended 31st March.	
	1918.	1919.
Average number of patients per diem	3,190	3,653
Number of patients under treatment	40,232	50,112
Deaths	2,607	4,359
Average annual cost of maintenance per occupied bed apart from administration, &c., charged	£118·1	£135·7
Number of out-patients attended during year	28,091	27,987

Charitable Institutions.

State charitable institutions are administered by combined Hospital and Charitable Aid Boards, who also distribute outdoor relief. In the case of recipients of old-age pensions, the pension is received by the officers of the Board as payment for the maintenance of the pensioner, but a proportion is handed over to the latter to be expended as he or she may choose.

Private Hospitals.

The Hospitals and Charitable Institutions Act, 1909, provides for the licensing (annually), management, and inspection of private hospitals. At the end of 1919 some 240 licensed private hospitals were in existence.

Maternity Hospitals.

There are six State maternity hospitals now open for the use of the public.

St. Helens Hospitals, 1919–20.

Town.	Confinements in Institution.			Confinements attended outside.
	Births.	Deaths of Mothers.	Deaths of Infants.	Births.
Auckland	317	..	3	217
Gisborne	90	..	..	..
Wellington	278	2	8	92
Christchurch	220	2	6	142
Dunedin	123	1	8	96
Invercargill	111	..	..	5
Totals	1,139	5	25	552

St. Helens Hospitals, 1915–16 to 1919–20.

Year ended 31st March.	Confinements in Institution.			Confinements attended outside.
	Births.	Deaths of Mothers.	Deaths of Infants.	Births.
1916	798	2	6	563
1917	1,071	8	28	523
1918	1,248	7	27	530
1919	1,123	18	26	521
1920	1,139	5	25	552

There is a maternity hospital attached to the Medical School at Dunedin, which also serves as a training-school for medical students and midwives.

Charitable maternity homes are established at Auckland, Otahuhu, Napier, Wellington, Christchurch, and Invercargill for the reception of unmarried girls. The Salvation Army have similar institutions at Auckland, Wellington, Christchurch, and Dunedin.

Registration of Nurses and Midwives.

The Nurses Registration Act provides that every person who has attained the age of twenty-three years and is certified as having had three

years' training as a nurse in a recognized general hospital, together with systematic instruction in theoretical and practical nursing from the medical officer and the matron of that hospital, and who passes the prescribed examination, is entitled to registration. There are now 2,728 nurses on the register.

The number of registered midwives on 31st March, 1920, was 2,638. Of these latter, 1,119 were trained and certificated, the remainder having satisfied the Registrar that at the date of the passing of the Act they had been for at least three years in *bona fide* practice as midwives, and that they bear a good character.

Orphanages and Other Children's Homes.

Exclusive of industrial schools, there are so far as is known some thirty-five institutions that may be described as orphanages or children's homes. The Education Act provides for the inspection of all orphanages and cognate institutions by Inspectors of the Education Department, with a view to securing that as regards education of the children and general management these organizations are acting consistently with the laws governing the education, care, and upbringing of children who are maintained in kindred institutions.

Under the control of the Education Department come also the various institutions for deaf and dumb, blind, or mentally defective children. These are dealt with in the section of this book dealing with Education.

SUBSECTION C.—MENTAL HOSPITALS.

There are seven public mental hospitals in the Dominion, maintained wholly or in part out of the public revenue. There is also one private hospital, licensed by the Governor-General for the reception of the mentally afflicted.

Information concerning the law dealing with the treatment of mental defectives is given in the 1914 issue of this book.

Patients under Treatment.

The number of patients at the end of the year 1919 was 4,647, including 60 Maoris.

Mental Hospital.	Males.	Females.	Total.
Auckland	596	401	997
Tokanui	151	49	200
Porirua	591	449	1,040
Nelson	99	103	202
Hokitika	193	72	265
Christchurch	356	388	744
Dunedin (Seacliff and Waitati)	623	432	1,055
Ashburn Hall (private mental hospital) ..	20	23	43
Absent on probation	38	63	101
Totals	2,667	1,980	4,647

The number of patients remaining at the close of each of the past five years, and the proportion per 10,000 of the population (excluding Maoris), are shown in the following table:—

MENTAL PATIENTS (EXCLUDING MAORIS), 1915–19.

Year.	Number remaining at Close of Year.			Proportion per 10,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1915	2,428	1,740	4,168	43·05	31·50	37·79
1916	2,533	1,804	4,337	46·06	32·76	39·41
1917	2,577	1,884	4,461	47·96	33·62	40·64
1918	2,564	1,921	4,485	47·30	33·92	40·46
1919	2,630	1,957	4,587	44·66	34·01	39·39
Means of five years	2,546	1,861	4,407	45·76	33·33	39·54

The total number of patients under oversight, care, or control during 1919 was 5,509 (males 3,178, females 2,331), as against 5,408 in 1918. The average number resident in mental hospitals was 4,501 in 1918 and 4,527 in 1919.

ADMISSIONS.

The total admissions to mental hospitals during the year 1919, were 883 (512 males and 371 females), this number not including 80 transfers from one institution to another. The principal causes of insanity as assigned on admission are given below, distinguishing each hospital:—

Causes.	Auckland.	Christchurch.	Dunedin.	Hokitika.	Nelson.	Porirua.	Tokanui.	Ashburn Hall.	Total.
Heredity	21	7	24	5	3	8	..	2	70
Congenital	49	13	26	4	8	28	..	..	128
Previous attack	16	21	18	1	4	23	..	..	83
Puberty and adolescence ..	..	16	4	..	1	8	..	..	29
Climacteric	10	8	6	..	1	2	..	3	30
Senility	34	18	18	2	2	24	..	..	98
Prolonged mental stress	35	9	16	..	3	23	1	2	89
Alcohol	20	19	6	4	2	16	..	..	67
Syphilis	12	9	4	..	1	17	..	4	47
Epilepsy	11	9	3	1	..	11	..	..	35
Influenza	16	1	..	..	..	5	..	1	23
Unknown	16	11	2	4	..	53	..	..	86
Other causes	29	10	23	..	..	33	1	2	98
Total	269	151	150	21	25	251	2	14	883

First Admissions.

Of the 883 persons admitted to mental hospitals during 1919, those admitted for the first time to any mental hospital in New Zealand numbered 744 (males 448, females 296), and those readmitted 139 (males 64, females 75).

Excluding the Native race, the number of first admissions and the rate per 10,000 of population for each of the past five years were as follows:—

First Admissions and Rate per 10,000 of Mean Population, 1915–19.

Year.	Number of First Admissions.			Proportion per 10,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1915	376	269	645	6·87	5·10	6·01
1916	436	283	719	7·90	5·17	6·54
1917	406	294	700	7·47	5·29	6·37
1918	367	320	687	6·80	5·68	6·23
1919	444	291	735	7·85	5·10	6·47
Means of five years	406	291	697	7·33	5·26	6·30

The figures for 1919 represent one first admission for every 1,546 persons in the Dominion.

Voluntary Inmates.

Persons labouring under mental defect, but capable of understanding the meaning of the procedure, may seek admission to a mental hospital as voluntary boarders. At the beginning of 1919 there were 51 boarders in residence (20 males, 31 females), and during the year 95 (36 males, 59 females) were admitted. If a voluntary boarder should after admission show mental defect sufficiently pronounced and sustained to render it improper to classify him any longer as such, application for a reception order is made to a Magistrate. During the year 1919, 6 (3 males, 3 females) were transferred from the voluntary to the ordinary register, and 5 died, while 66 (24 males, 42 females) were discharged, leaving 69 resident at the end of the year (26 males, 43 females).

Ages of Inmates.

A summary is attached showing the ages of patients in mental hospitals at the close of 1919:—

Age, in Years.	Males.	Females.	Total.	Age, in Years.	Males.	Females.	Total.
1 to 5 ..	2	2	4	60 to 70 ..	355	256	611
5 „ 10 ..	10	12	22	70 „ 80 ..	168	124	292
10 „ 15 ..	33	17	50	80 „ 90 ..	48	26	74
15 „ 20 ..	55	49	104	90 and over ..	3	3	6
20 „ 30 ..	266	173	439	Unknown ..	44	32	76
30 „ 40 ..	581	393	974				
40 „ 50 ..	632	481	1,113	Totals ..	2,667	1,980	4,647
50 „ 60 ..	470	412	882				

Maoris admitted and remaining.

The number of Maoris admitted as patients to the mental hospitals is small. Twelve (6 males, 6 females) were admitted during the year, and 60 (37 males, 23 females) remained at the end of the year.

Discharges and Deaths.

Dealing with patients of all races, the next table gives the average number resident, those who were discharged as recovered, and those who died, during the period 1915–19:—

Year.	Average Number Resident.	Discharged as recovered.		Died.	
		Number.	Per Cent. of Average Number Resident.	Number.	Per Cent. of Average Number Resident.
1915	4,094	359	8·77	284	6·94
1916	4,251	331	7·79	289	6·80
1917	4,368	323	7·39	318	7·28
1918	4,501	283	6·29	448	9·95
1919	4,527	337	7·44	342	7·55
Means of five years	4,348	327	7·52	336	7·73

Deaths in Mental Hospitals, 1919.

Cause of Death.	Auckland.	Christchurch.	Dunedin.	Hokitika.	Nelson.	Porirua.	Tokanui.	Ashburn Hall.	Totals.
Tuberculosis	8	4	4	..	1	6	..	..	23
Cancer	2	..	2	..	..	2	..	..	6
Other general diseases	4	..	3	..	2	..	..	..	9
General paralysis of the insane ..	17	3	6	1	1	14	..	1	43
Organic brain-disease	29	5	1	..	1	..	..	..	36
Epilepsy	9	1	5	1	..	2	..	..	18
Other nervous diseases	9	2	8	1	..	7	..	..	27
Diseases of the respiratory system ..	5	..	6	3	1	6	..	..	21
Diseases of the circulatory system ..	14	4	12	5	..	17	1	1	54
Diseases of the digestive system ..	2	..	1	..	..	1	1	..	5
Diseases of the genito-urinary system	3	1	..	..	..	1	..	..	5
Old age	21	17	18	4	8	21	..	2	91
External causes	1	..	..	..	..	1	..	..	2
Ill-defined causes	..	1	..	..	..	1	..	..	2
Totals	124	38	66	15	14	79	2	4	342

A table is added showing for all admissions since 1876 the percentages of patients discharged (as recovered, relieved, and not improved, separately), dying, and remaining.

	Males.	Females.	Both Sexes.
Discharged—			
Recovered	36·78	42·79	39·22
Relieved	7·25	9·18	8·04
Not improved	9·54	9·27	9·44
Died	32·41	22·61	28·42
Remaining at end of 1919	14·02	16·15	14·88
	100·00	100·00	100·00

Private Mental Hospital.

There is only one licensed private institution in the Dominion, that at Wakari, near Dunedin, established in 1882. Particulars of admissions, &c., for the past five years are as follows:—

Private Mental Hospital (included in previous figures).

Year.	Admissions.	Discharges.	Deaths.	Patients remaining at End of Year.
1915	8	12	1	40
1916	15	5	4	46
1917	20	11	3	52
1918	11	11	7	45
1919	15	12	4	44

Expenditure, etc.

The total expenditure on maintenance of mental hospitals (not including the cost of new buildings and additions), and receipts from patients and for sale of produce, &c., during the past five years were as follows:—

Year.	Total Expenditure.	Receipts from Patients, Sale of Produce, &c.	Net Expenditure.
	£	£	£
1915	178,373	51,786	126,587
1916	197,663	60,745	136,918
1917	220,777	68,446	152,331
1918	248,609	69,195	179,414
1919	286,847	94,130	192,717

The total net expenditure out of the Public Works Fund for buildings and equipment from 1st July, 1877, to 31st March, 1920, was £891,540.

Farms are conducted in connection with the various mental hospitals, the inmates themselves doing most of the labour. During 1919, sales of produce brought in £14,285, while the value of produce grown on the farms and consumed in the institutions was estimated at £22,953. Expenses in connection with the farms amounted to £24,171, so that the year's working shows a credit balance of £12,707.

The net cost per patient for the year 1919 was £42 8s. 5d. as against £39 18s. 5½d. for the previous year.

SECTION IV.—EDUCATION.

Census Figures.

As a result of the census taken in October, 1916, it is found that 83·53 per cent. of the persons in New Zealand at that date were able to read and write, 0·68 per cent. could read only, while 15·79 per cent. could neither read nor write. Of the latter, children form a large proportion.

The proportion able to read and write has fallen slightly as compared with figures compiled from the 1911 census returns. This small decrease is probably due to the disturbance of the normal proportions of the population brought about by the absence with the Forces of a number of men between twenty and forty years of age.

Public Expenditure on Education.

In the following tables an attempt has been made to analyse the public expenditure on the various branches of education.

Analysis of Expenditure on Education in New Zealand for the Year 1919–20.

(Figures given in every case to the nearest £1,000.)

Branch of Education.	Amount.			Per Head of Population (including Maoris).		
	Out of Public Funds.*	Secondary and University Reserves Revenue.	Total from all Public Sources.	Out of Public Funds.*	Secondary and University Reserves Revenue.	Total from all Public Sources.
	£	£	£	s. d.	s. d.	s. d.
Primary.	1,939,000	..	1,939,000	31 11	..	31 11
Secondary † ..	288,000	51,000	339,000	4 8	1 0	5 8
Continuation and technical	87,000	..	87,000	1 5	..	1 5
Higher	69,000	29,000	98,000	1 1	0 6	1 7
	2,383,000	80,000	2,463,000	39 1	1 6	40 7
Industrial schools, &c.	87,000	..	87,000	1 5	..	1 5
Special schools ..	13,000	..	13,000	0 3	..	0 3
Superannuation and miscellaneous	61,000	..	61,000	1 1	..	1 1
Totals ..	2,544,000	80,000	2,624,000	41 10	1 6	43 4

* Including expenditure out of income from primary-education reserves. † Including technical high schools and secondary departments of district high schools.

The following table shows the total amount expended on education out of the public funds only, and the amount per head of population:—

Year ended 31st March.	Amount expended out of Public Funds.	Expenditure per Head of Population out of Public Funds.
	£	s. d.
1899	519,000	13 4
1904	679,000	15 6
1914	1,301,000	23 0
1918	1,814,000*	31 7*
1919	1,986,000*	34 4*
1920	2,554,000*	41 10*

* Income from primary-education reserves included.

Public Instruction.

The central Department of Education, with a Cabinet Minister at its head, manages directly the Native schools and special schools, and also administers the Education Act. For the purposes of primary education the Dominion is divided into nine education districts, each of which is presided over by an Education Board, and these in turn are divided into smaller districts, in each of which a School Committee elected by the householders has authority. The School Committees of each education district elect the Education Board, and are subject to its general control. The Board receives from the Department and disburses money voted by the General Assembly for the purposes of instruction, and appoints the teachers, subject to the condition of consultation with the Committee of the school district.

A General Council of Education created by the Act reports to the Minister upon educational methods or developments deemed worthy of introduction into the Dominion and upon such matters as bear upon the provision of further facilities for education, whether local or general.

Education at the public schools is free and purely secular. Attendance at a registered school is obligatory upon all children between the ages of seven and fourteen, except when special exemptions are granted. The Inspectors who visit the schools are officers of the Education Department.

The programme of primary instruction provided by the Act includes English, arithmetic, geography, history and civics, drawing and handwork (including needlework), nature-study and elementary science, physical instruction, moral instruction and health, and singing.

School Statistics to 31st December, 1919.

The number of scholars and students as in 1919 is shown in the following summary. Pupils of private schools not inspected by the Education Department are excluded.

Primary education—	
Public schools	191,153
Native village and Native mission schools	5,358
Registered private primary schools	20,977
Lower departments of secondary schools	686
	218,174

Secondary education—	
Secondary schools	9,068
Secondary departments of district high schools	2,159
Technical high schools	2,926
Maori secondary schools	434
Registered private secondary schools	1,497
	16,084
Technical and continuation (excluding technical high schools)	17,950
Higher education—	
University colleges (including training-college students) ..	3,060
Lincoln Agricultural College	52
	3,112
Total under instruction	255,320

This is an increase of 5,731 on the number under instruction during the previous year.

The public primary schools numbered 2,400 in 1919, against 2,365 in 1918. The number of registered private primary schools was 212. The number of aided or endowed colleges, grammar and high schools in operation was 34, and the number of technical schools 9. The number of University colleges was 4. The number of private schools from which returns were received in 1918 by the Government Statistician was 320. The number of primary and secondary schools established for the education of the Native or Maori race was 134.

Public (State) Schools.

Compared with 1918, there was in 1919 an increase of 1,125 in the number of pupils belonging to the public schools at the end of the year, and the average attendance shows an increase of 5,049 for the whole year.

Year.	Number of Schools.	Pupils at End of Year.	Mean of Average Weekly Roll.	Average Attendance, Whole Year.	Average Attendance as Percentage of Weekly Roll.
1878	748	65,040	..	48,773	..
1888	1,158	112,685	113,636	90,108	79·3
1898	1,655	131,621	133,782	111,636	83·4
1908	1,998	147,428	145,974	127,160	87·1
1913	2,255	172,168	169,530	151,242	89·2
1915	2,338	183,214	181,229	163,092	90·0
1916	2,355	185,884	184,056	163,156	88·6
1917	2,368	190,354	187,954	168,711	89·8
1918	2,365	194,934	191,382	169,836	88·7
1919	2,400	196,059	193,655	174,885	90·3

Age and Sex of Pupils.

The following table shows the age and sex of the pupils on the rolls of the public schools of the Dominion at the end of 1919, and the percentage of the roll for each age:—

Age, in Years.	1919.			Percentages for Five Years.				
	Boys.	Girls.	Total.	1915.	1916.	1917.	1918.	1919.
5 and under 6	7,863	7,194	15,057	7·8	7·9	8·0	7·4	7·8
6 " 7	10,721	9,907	20,628	10·8	10·6	10·6	10·7	10·6
7 " 8	11,660	10,689	22,349	11·7	11·6	11·5	11·4	11·6
8 " 9	11,533	10,635	22,168	11·4	11·7	11·7	11·3	11·4
9 " 10	11,342	10,634	21,976	11·4	11·2	11·6	11·4	11·3
10 " 11	11,241	10,628	21,869	11·2	11·1	11·1	11·5	11·3
11 " 12	11,143	10,220	21,363	10·9	10·8	10·9	10·7	11·0
12 " 13	10,526	9,660	20,186	10·0	10·5	10·4	10·5	10·4
13 " 14	8,944	8,161	17,105	8·5	8·5	8·8	8·9	8·8
14 " 15	4,579	3,963	8,542	4·5	4·3	4·2	4·7	4·4
15 and over ..	1,441	1,216	2,657	1·8	1·8	1·2	1·5	1·4
Totals ..	100,993	92,907	193,900	100·0	100·0	100·0	100·0	100·0

Medical Inspection and Physical Education.

Physical exercises based on the syllabus of the Board of Education, England, are practised in all public schools under the supervision of a staff of physical instructors. Corrective classes for children with physical deformities are also held with good results.

A staff of ten School Medical Officers and fifteen School Nurses medically examine public-school children, notifying parents when medical or dental treatment is required. The number of public schools visited in 1919 was 704, and the number of children completely examined was approximately 30,000.

Conveyance and Board of Scholars.

The following shows expenditure for 1919 on the above-named services:—

	Railway Fares.	Boarding-allowance and Conveyance by Road or Water.	Total.
	£	£	£
Primary	11,459	17,757	29,216
Secondary	5,613	155	5,768
Technical	3,852	..	3,852
Totals	20,924	17,912	38,836

Manual Instruction in Primary Schools.

Classes for elementary handwork exist in 2,166 primary schools, and in 1,562 schools other branches of manual instruction are taught. The capitation payments made by the Department on account of manual instruction for the year 1919–20 amounted to £57,560. Instruction is given in a wide variety of subjects, ranging from laundry-work to agriculture.

Class-books and School and Class Libraries.

A capitation grant at the rate of 3d. per head on the average attendance is paid to Boards for the purpose of supplying schools with supplementary continuous readers for class-reading or free supply in certain cases.

Provision has been made for the payment of subsidies of £1 for £1 on moneys raised by voluntary contributions for school libraries. In addition, a subsidy is payable by the Education Board not exceeding £5 for any one school.

"School Journal."

An illustrated paper, called the *School Journal*, is published monthly by the Education Department for free circulation among pupils attending public primary schools and for sale at moderate prices to private schools.

Public-school Teachers.

The number of teachers in the public schools, exclusive of those employed in the secondary departments of district high schools, is shown for a number of years. The figures are as in December of the years given.

Year.	Adults.			Pupil-teachers.		
	Males.	Females.	Total.	Males.	Females.	Total.
1878	707	454	1,161	181	332	450
1888	1,039	887	1,926	219	694	913
1898	1,234	1,370	2,604	229	831	1,060
1908	1,331	2,021	3,352	161	476	637
1913	1,603	2,659	4,262	142*	474*	616*
1915	1,591	3,077	4,668	141*	485*	626*
1916	1,501	3,209	4,710	137*	519*	656*
1917	1,383	3,324	4,707	132*	517*	649*
1918	1,366	3,452	4,818	123*	523*	646*
1919	1,606	3,394	5,000	123*	503*	626*

* Excluding probationers.

The total number of teachers employed in primary schools, excluding probationers and including pupil-teachers, in 1919 was 5,626 (1,729 males and 3,897 females). The number of probationers was 436 (62 males and 374 females). Taking all schools with two or more teachers, the average number of pupils per teacher was 38, and in schools with six or more teachers the average number was 45.

Omitting schools with less than 21 pupils the ratio of adult men teachers to adult women teachers in 1919 was 100 to 193. The proportion of men to women in charge of schools with 1 to 20 scholars was 100 to 362. If all public schools and all teachers are included, it is found that the ratio of men teachers to women teachers was 100 to 267 in 1918, and 100 to 225 in 1919. The ratio of male pupil-teachers to female pupil-teachers was 100 to 425 in 1918, and 100 to 409 in 1919.

The average salaries paid to teachers in 1919, including house allowance or value of residence were—Male head teachers, £380; female head teachers, £319; male assistants, £301; female assistants, £197; sole male teachers, £221; sole female teachers, £193.

Information as to the Teachers' Superannuation Fund will be found in the section of this book dealing with Pensions, Superannuation, &c.

Training of Teachers.

Training colleges are situated in the four principal centres of the Dominion. The total provision is for 150 students at each centre. Towards this number, out of the total reported, Auckland contributed in the year 1919, 175; Wellington, 152; Christchurch, 129; and Dunedin, 126.

The management of the training colleges is entrusted to the local Education Boards, subject to general regulations.

The amount paid to Education Boards during 1919–20 for the training of teachers was £89,070.

Receipts and Payments of Education Boards.

The receipts and payments of the Education Boards (numbering nine altogether) in 1919 are tabulated below, with further particulars:—

Receipts.	£	*Payments.*	£
From Government,—		Staff salaries, office expenses, &c.	38,003
General Fund	47,863	Teachers' salaries and allowances	1,281,942
Teachers' salaries and allowances	1,278,842	School and class libraries ..	1,494
School and class libraries ..	3,633	Conveyance and board of school-children	16,715
Conveyance and board of school-children	11,972	Incidental expenses of schools ..	83,360
Incidental expenses of schools	83,301	Training of teachers	79,703
Training of teachers ..	79,801	Manual instruction	63,095
Manual instruction.. ..	51,884	Technical instruction	100,823
Technical instruction ..	97,427	Public-school buildings, sites, furniture, &c.	106,296
Public-school buildings, sites, furniture, &c.	91,054	Rebuilding, rent, maintenance of buildings	124,448
Rebuilding, rent, maintenance of buildings	139,105	Subsidies, scholarships, workshop expenses, &c.	33,678
Scholarships, subsidies, and miscellaneous	17,386		
From local sources	46,988		
Total	£1,949,256	Total	£1,929,557

Private and Denominational Schools.

There were 320 private schools at the end of 1918, 35 were for boys, 59 for girls, and 226 for children of both sexes. The number of pupils attending

them was 26,237—namely, 11,083 boys and 15,154 girls, not counting 134 Maoris (62 boys and 72 girls). Of the private schools, 173 were Roman Catholic, with 18,734 pupils.

Year.	Number of Private Schools.	Pupils.			Included in previous Numbers.	
		Boys.	Girls.	Totals.	Roman Catholic Schools.	Pupils at Roman Catholic Schools.
1909	306	7,597	10,333	17,930	150	12,611
1910	318	8,036	10,945	18,981	156	13,161
1911	326	8,310	11,558	19,868	158	13,941
1912	310	8,801	11,437	20,238	156	14,476
1913	304	9,146	11,969	21,115	155	14,837
1914	321	9,641	12,439	22,080	180	16,471
1915	310	9,555	12,784	22,339	172	15,892
1916	305	9,791	13,621	23,412	170	17,266
1917	320	10,749	14,742	25,491	171	18,257
1918	320	11,083	15,154	26,237	173	18,734

The total number of teachers engaged in instruction in private schools was 1,146 (135 men and 1,011 women). Included in these figures are the teachers of Roman Catholic schools, 69 males and 550 females. A summary of the ages of the pupils in 1918 was,—

Age.	Roman Catholic Schools.		All Private Schools.		
	Boys.	Girls.	Boys.	Girls.	Total.
Under 5 years	91	77	490	460	950
5 years and under 7 ..	1,636	1,761	2,166	2,498	4,664
7 ,, 13 ..	4,770	5,819	5,942	7,722	13,664
13 ,, 15 ..	1,577	1,922	1,906	2,817	4,723
15 years and over ..	367	714	579	1,657	2,236
Total	8,441	10,293	11,083	15,154	26,237

Any private school may apply to be registered under the Education Act, 1914. At the end of the year 1919 the number of registered private primary schools was 212. The total roll number was 20,977, and the average attendance 18,472.

The roll number of the eighteen registered private secondary schools in 1919 was 1,497.

SCHOOLS FOR NATIVES.

The number of Native village schools in operation at the end of 1919 was 119. In addition, there were thirteen private schools at which education for Maori boys and girls is provided. Of these, ten are maintained from the incomes arising out of lands held in trust for educational purposes by various denominational bodies; the others are supported by private resources.

On the rolls of the 119 village schools at the 31st December, 1919, there were 5,198 children (including 648 Europeans). The average attendance for the year was 4,485, the percentage of regularity being 86·4, and the

average weekly roll number 5,190. The total number of pupils on the rolls of the Native mission schools was 167, and on those of the secondary schools 434. At the end of the year, therefore, the total roll number of all the Native schools inspected by officers of the Education Department was 5,799, the average weekly roll being 5,803, and the total average attendance 5,036.

Besides the children of the Maori race who are receiving instruction in the Native schools there is a still larger number attending public schools, so that the total number of primary pupils of Maori race (including those in the mission schools) is 9,737, made up as follows:—

Attending Government Native schools	4,550
„ public schools	5,020
„ mission schools	167
	9,737

Of the children on the rolls of the Native schools in December, 1919, 84·4 per cent. were Maoris speaking Maori in their homes, 3·1 per cent. were Maoris speaking English, and 12·5 per cent. were Europeans.

The total net expenditure on Native schools during the year ended the 31st March, 1920, was £59,166. Included in this is the sum of £46,032 expended on teachers' salaries, £2,885 expended on new buildings and additions, £2,975 on maintenance of buildings, repairs, &c., and £3,524 on secondary education.

The staffs of the village schools included seventy-three male and forty-four female head or sole teachers, and 122 assistants. The average salary of the head or sole teachers was £253 13s. 3d., of the 115 female assistants £115 15s. 8d., and of the seven male assistants £115.

Secondary Education.

Secondary education is carried on at thirty-four secondary schools, sixty district high schools, nine technical high schools, ten Maori secondary schools, and twenty-one private secondary schools (registered).

The total numbers of pupils attending the thirty-four secondary schools for the last terms of 1918 and 1919 respectively were as follows:—

	1918			1919		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Roll (exclusive of lower departments) ..	4,621	3,763	8,384	5,054	4,014	9,068
Number in lower departments	397	268	665	392	294	686
Totals	5,018	4,031	9,049	5,446	4,308	9,754

In the same years these schools were staffed as follows:—

	1918			1919		
	M.	F.	Total.	M.	F.	Total.
Regular staff	175	195	370	186	195	381
Part-time teachers	42	43	85	74		74

The average number of pupils per teacher (excluding part-time teachers) was thus 22.

The number on the roll of the secondary departments of district high schools at the end of the year 1919 was 2,159.

Besides the head teachers, who generally take some part in the secondary instruction, there were employed in 1919 in the secondary departments of district high schools 105 special assistants—34 men and 71 women. The average number of pupils per teacher was 21.

The total numbers on the roll of technical high schools at any time during the years 1918 and 1919 were as follows :—

	1918.	1919.
Boys	1,265	1,438
Girls	1,482	1,488
Totals	2,747	2,926

The number on the roll of secondary schools for Maoris (all of whom were boarders) at the end of 1919 was 434.

The number of children on the rolls of registered private secondary schools at the end of the year was 1,497, being 595 boys and 902 girls.

Summarizing all these figures, and excluding pupils in the lower departments of secondary schools, we obtain the following statement of the numbers receiving some form or other of secondary instruction during the years 1918 and 1919 (as nearly as can be ascertained) :—

	1918.	1919.
Secondary schools	8,384	9,068
District high schools	2,283	2,502
Technical high schools	2,747	2,926
Maori secondary schools	471	434
Private secondary schools..	1,366	1,497
Totals	15,251	16,427

The figure shows an increase of 8 per cent. over the corresponding figure for the previous year, and an increase of nearly 50 per cent. over the figure of five years ago.

Free Secondary Education.

The following are some of the figures for 1918 and 1919 in regard to free places in secondary schools :—

	1918.	1919.
Number of secondary schools giving free tuition	32	32
Roll number of these schools	7,871	8,536
Number of free-place holders at end of year ..	6,966	7,657
Average number of free-place holders during year	7,177	8,006
Free-place holders as a percentage of roll number	91 per cent.	94 per cent.
Total annual payment by Government for free places	£85,422	£111,062

In order to arrive at the total number of pupils in New Zealand receiving free secondary instruction it will be necessary, however, to include also 104 holders of scholarships or exhibitions carrying free instruction not otherwise enumerated, which are granted by the secondary schools included above or by endowed secondary schools not coming under the conditions for free places, 2,015 free-place holders at district high schools, ninety Maori pupils receiving free education in Maori secondary schools, and 2,754 holders

of free places in technical high schools. Consequently, there were approximately 12,620 pupils receiving free secondary education in the Dominion, exclusive of those holders of free places in technical schools (mostly evening students), who, while not taking full-day courses, were nevertheless receiving free education of secondary grade.

The following table gives a summary of the various secondary free places at the end of the year for which payment was made by Government:—

Free Places in December, 1918 and 1919.

	1918			1919		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
(i.) Secondary schools—						
(*a.*) Junior free pupils	2,503	2,405	4,908	2,793	2,573	5,366
(*b.*) Senior free pupils	1,081	977	2,058	1,187	1,104	2,291
Totals ..	3,584	3,382	6,966	3,980	3,677	7,657
(ii.) District high schools—						
(*a.*) Junior free pupils	876	977	1,853	849	859	1,708
(*b.*) Senior free pupils	103	167	270	116	191	307
Totals ..	979	1,144	2,123	965	1,050	2,015
(iii.) Maori secondary schools..	45	58	103	42	48	90
(iv.) Technical high schools—						
(*a.*) Junior free pupils	1,053	1,160	2,213	..	..	..
(*b.*) Senior free pupils	109	182	291	..	..	..
Totals ..	1,162	1,342	2,504	1,351	1,403	2,754
Grand totals ..	5,770	5,926	11,696	6,338	6,178	12,516

Scholarships held at Secondary Schools and District High Schools.

National Scholarships.

At the examinations held in 1919 217 candidates qualified for Junior National Scholarships, of which number 6 were pupils of sole-teacher schools, and 67 were pupils of secondary schools. The number of candidates qualifying for Senior National Scholarships was 122, of which number 6 qualified on the alternative programme provided specially to suit the needs of those taking a rural or domestic course.

The following figures indicate the number and the value of scholarships current in 1918 and 1919, respectively:—

	1918.	1919.
Number of scholarship-holders—		
Boys	486	481
Girls	310	285
Totals	796	766
Number receiving boarding-allowance (included in the above total)	239	221
Number receiving travelling-allowance (similarly included)	47	42
Number held at secondary schools	687	661
Number held at district high schools	86	82
Number held at other registered secondary schools ..	23	23
Total annual rate of payment	£13,130	£12,913

Private Scholarships.

The number of foundation and private scholarships in the last term of 1919 was 150, of a total annual value of £1,547. Of the holders, fifty-one were also Government free pupils under the regulations. In addition, free tuition was given by the schools to holders of foundation and private scholarships to the value of £470, not including Government free places.

WAR BURSARIES FOR SOLDIERS' DEPENDANTS.

Regulations which came into force in January, 1919, provided for the award of bursaries to dependants of killed or disabled members of the New Zealand Expeditionary Force. To qualify for a war bursary a child must be eligible for—

(*a.*) Free education at technical classes; or
(*b.*) A free place at a secondary school, district high school, or technical high school; or
(*c.*) A University or educational bursary at a University college.

A bursary entitles the holder to an allowance, in addition to free tuition, of £1 10s. or £3 per annum in the case of those qualified under (*a*), £5 for those under (*b*), or £10 for those under (*c*). Lodging-allowance is also payable to bursars who are obliged to live away from home to attend school, at the rate of £15 per annum under (*a*) and £30 under (*b*) and (*c*); travelling-allowances varying from £5 to £10 per annum are also made when travelling is necessary. During 1919 the number of bursaries held at secondary schools was twenty-seven, the expenditure thereon being £524.

FINANCES OF SECONDARY SCHOOLS.

The following is a summary of the receipts and payments of all secondary schools (excluding Wanganui Collegiate and Christ's College Grammar Schools) for the year 1919:—

Receipts.

	£
Endowments—	
Sales and mortgage-money repaid	7,945
Lands vested in High School Boards	44,261
Secondary-education reserves ...	7,209
Interest on moneys invested ...	1,043
Government grants—	
Grants for buildings, sites, rent, apparatus, &c., and subsidies ...	23,347
Capitation for free places ...	114,858
Capitation for manual instruction	2,825
School fees	11,696
Lower Department Account ...	4,608
Boarding-school Account ...	43,290
Loans, transfers from Capital Account, interest, &c.	579
Technical Classes Account ...	2,842
Voluntary contributions, income from property not reserves, refunds, and sundries	8,755
	£273,258

Payments.

	£
Endowments (including proportion of office expenses)	11,731
Teachers' salaries and allowances	122,511
Incidental expenses of secondary departments—	
Office expenses and salaries ...	3,565
Printing, stationery, and advertising	2,473
Cleaning, heating, lighting, and care of school-grounds ...	9,306
Material, examinations, prizes, games, and other incidentals ...	3,296
Manual instruction (excluding buildings, &c.)	1,804
Sites, buildings, furniture, apparatus, taxes, &c.	53,990
Lower Department Account ...	4,448
Boarding-school Account	41,985
Investments, loans repaid, and interest	6,917
Technical Classes Account ...	2,856
Scholarships, advances to pupils, and miscellaneous	3,696
	£268,578

The total debit balance at the end of 1919 was £58,544, for the most part due to loans required for the erection of necessary buildings. The following is a summary of the monetary assets and liabilities at the end of the year:—

Monetary Assets.	£	*Liabilities.*	£
Bank balances	32,975	Overdrafts	63,494
Other assets	26,947	Other liabilities	54,972
Total	£59,922	Total	£118,466
		Debit balance ..	£58,544

Lower Departments of Secondary Schools.

There were lower departments in fourteen secondary schools during 1919; the total number of pupils in those departments was 686.

Technical Education.

The Education Act provides for public instruction in such subjects of art, science, and technology as are set forth in regulations. Classes recognized under the Act are eligible for grants in aid of necessary buildings, equipment, and material, for capitation, and for subsidies of £1 for £1 on voluntary contributions. Free technical education is also provided for.

Technical Classes other than Classes at Technical High Schools.

The total number of classes held in 1919 was 2,014, and the total number of students in attendance 17,950. The following figures show the number of classes at which the various subjects indicated were taken:—

Mathematics and science ..	120	Domestic subjects	371
Engineering	238	Commercial subjects	380
Wood and lead working, and other trade subjects ..	201	Subjects of general education ..	377
Agriculture, dairy-work, &c. ..	95		
Art and art crafts	232	Total	2,014

Regulations requiring the attendance of young persons between the ages of fourteen and seventeen who are not otherwise receiving a suitable education or who are not specially exempted from attendance were in operation in 1919 in certain school districts in the Auckland, Wanganui, Taranaki, Hawke's Bay, and Canterbury education districts. The classes established under these regulations were attended by 1,372 students.

The number of discharged soldiers who received free education at technical schools in 1919 was 1,021.

The number of pupils receiving free education under the regulations for free places at technical high schools and other technical schools and classes was 4,488—2,326 males and 2,162 females; the number for the previous year was 4,211.

Technical High Schools.

These schools (nine in number) are of secondary grade, and provide industrial, domestic, agricultural, commercial, and art courses. The number of pupils in attendance was as follows: Auckland, 587; Wanganui, 300; Wellington, 405; Napier, 275; Westport, 28; Christchurch, 596; Dunedin,

435; and Invercargill, 300. The total roll number was 2,926, an increase of 179 over that of the preceding year. Figures for the newly established school at Hawera are not included. The schools appear to meet the needs of a number of young people who would not otherwise proceed to secondary schools. The courses of instruction taken up by pupils were as follows:—

	Males.	Females.	Total.
Industrial	786	..	786
Commercial and general	448	1,187	1,635
Domestic	..	297	297
Agricultural	203	..	203
Art	1	4	5
Totals	1,438	1,488	2,926

Capitation earned on account of technical high schools during 1919 totalled £41,113.

The following table classifies the free pupils at technical high schools in 1918 and 1919:—

	1918.			1919.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Junior free pupils ..	1,053	1,160	2,213	1,232	1,172	2,404
Senior free pupils ..	109	182	291	119	231	350
Totals ..	1,162	1,342	2,504	1,351	1,403	2,754

Expenditure on Technical Education.

The following is a summary of the expenditure by the State on technical instruction during the year ended the 31st March, 1920:—

	£
Capitation	95,201
Subsidies on voluntary contributions	6,934
Scholarships and bursaries	2,985
Grants in aid of material for class use	5,844
Grants for buildings and equipment	13,319
Rents	1,293
Conveyance of instructors, students, and free pupils ..	4,467
Examinations (less recoveries)	103
Inspectors' salaries and travelling-expenses	1,976
Sundries	123
	£132,245

Special Schools and Care of Dependent Children.

Child Welfare.

The functions of the Special Schools Branch of the Education Department include provision (1) For the maintenance, education, and training of destitute, dependent, or homeless children and epidemic orphans who have lost both parents; for the training of uncontrollable and delinquent children and juvenile offenders, and for the supervision of all young persons under the age of sixteen years who are placed on probation by the Courts: (2) for the supervision of all infants and young children under the age of six years maintained apart from their parents for payment either in foster-homes or private institutions, or adopted with premium: and (3) for the

education and maintenance of all afflicted children—the deaf, blind, and the feeble-minded.

The number of new cases actually dealt with in 1919 was 864, as compared with 381 for 1918, and 358 for 1917.

This abnormal increase has necessitated the adoption of a system providing for children being dealt with in their own districts.

The juvenile probation system has also been extended to such districts as Whangarei, Hamilton, and Nelson. A boys' probation home has been established in each of the four centres. The number of cases dealt with by the Probation Officers is as follows: Auckland, 401; Wellington, 127; Christchurch, 196; Dunedin, 94: total, 818.

Children boarded out.

The number of children boarded out in foster-homes at the end of the year was 1,696.

On account of the increased cost of living the boarding-out rate has been raised from 15s. to 17s. 6d. per week for infants under twelve months, and from 12s. 6d. to 15s. for children over that age and up to fifteen years, or longer if the child in question is still attending school. In addition, a very complete initial outfit of clothing is supplied with each child, and the Department provides free medical and dental treatment and medicines. School books and stationery are also provided for children attending school.

Boys' Schools.

The boys' Training-farm at Weraroa caters for boys of all ages who through the commission of offences against the law are not considered fit to associate with the children attending an ordinary public school, at least not until they have undergone a course of training and discipline at Weraroa.

There is a special school for mentally backward boys at Nelson.

Care of the Feeble-minded.

Institutions at Otekaike and Nelson are available for the reception of feeble-minded boys, who, under capable supervision, are employed in farm-work, garden and orchard work, and in the bootmaking, basketmaking, matmaking, and carpentering shops. Girls are provided for at the Special School at Richmond, and employed in housework and laundry-work, in the work-room sewing, knitting, &c., and in outside occupations, such as gardening and flower-growing.

Infant-life Protection.

This work is now carried out under the supervision of trained nurses who are fully qualified in the care and feeding of infants and young children. The majority of infants dealt with under this system are illegitimate, and have been neglected to such an extent prior to placing them in foster-homes that the greatest care is necessary in catering for their welfare.

Deaf Children and Children with Speech Defects

During 1919 special classes have been established in the various centres for the education of the hard-of-hearing children and for the correction of defective speech among children. A school at Sumner exists for the prelimi-

nary teaching of stone-deaf children and young children who, in addition to being deaf, have little or no speech, and incidentally for the training of teachers for the deaf.

District High Schools.

Of sixty secondary departments of district high schools, the average attendance in 1919 was in 18 cases, 12 to 20; in 15 cases, 21 to 30; in 22 cases, 31 to 70; in 2 cases, 71 to 105; and in 3 cases over 105.

Education Board.	Average Attendance, 1919.	Number of Assistant Teachers.			Average Number of Pupils per Assistant Teacher.	Statutory Annual Rate of Salary as in December, 1919.		
		M.	F.	Total.		£	s.	d.
Auckland	396	8	11	19	21	5,740	0	0
Taranaki	186	1	5	6	30	1,595	0	0
Wanganui	143	4	4	8	24	2,305	0	0
Hawke's Bay	124	3	3	6	21	1,755	0	0
Wellington	316	3	12	15	22	4,455	0	0
Nelson	164	1	6	7	23	1,940	0	0
Canterbury	684	11	20	31	22	9,135	0	0
Otago	262	3	10	13	21	4,055	0	0
Totals, 1919 ..	2,275	34	71	105	22	30,980	0	0

Courses bearing more or less on rural pursuits are taken in many district high schools, 69 per cent. of the boys and 32 per cent. of the girls studying agricultural science, 24 per cent. of the pupils taking dairy-work, 55 per cent. of the boys learning woodwork, and 52 per cent. of the girls cookery or needlework. Latin is taken by only 31 per cent. of the pupils, and French by 51 per cent.

Rural courses were, in 1919, in operation at forty-seven district high schools, and were taken by 1,635 pupils.

Higher Education.

The affairs of the University of New Zealand are controlled by three Courts—the Senate, the Board of Studies, and the General Court of Convocation.

The University of New Zealand has power to confer degrees, but is not itself a teaching body, undergraduates for the most part keeping their terms at one or other of the four affiliated institutions—Otago University, Canterbury College, Auckland University College, and Victoria University College.

The revenue of the University is derived mainly from a statutory Government grant of £4,000 per annum, authorized by the New Zealand University Amendment Act, 1919, from fees, and from interest on investments.

Auckland University College and Victoria University College each receive an annual statutory grant of £11,500, while Canterbury College receives £4,500 and Otago University £10,000. The two latter institutions are endowed with reserves of land. In addition a certain proportion of the income from the National Endowment Fund for the purposes of education is paid directly to the four affiliated institutions. In 1919 the sum paid to each out of the fund

amounted to £1,881. There is also now provision for the payment under regulations of a Government subsidy on voluntary contributions to the funds of the institutions affiliated to the University of New Zealand.

The total amount paid by the Education Department on account of the University of New Zealand and the affiliated colleges for the year 1919–20 was £68,975.

There were in 1919 2,961 students actually in attendance at the four University colleges. Of these, 109 were graduates, 1,938 undergraduates, and 914 unmatriculated students. In addition to the students mentioned above, there were 99 students attached to the various University colleges, but exempt from lectures. There were also 52 students taking an agricultural course of University grade at the Lincoln Agricultural College.

Free University Education.

The University Junior Scholarships (fourteen of which were gained in 1919) are of the value of £20 per annum plus tuition fees, and are tenable for three years. In the case of holders living away from home a further sum of £30 per annum is allowed. The University National Scholarships are of equal monetary value, the number gained in 1919 being twenty-three. Taranaki Scholarships are of the annual value of £60, and the Senate may at discretion extend the tenure from three to four years. There are also some thirty or forty local and privately endowed scholarships awarded on the results of the same entrance examination.

Scholarships awarded during the degree course are the Senior University and John Tinline Scholarships. The various colleges have also private scholarships for which their own students may compete.

The chief scholarships awarded at the end of the University course are the Rhodes Scholarship, the 1851 Exhibition Scholarship, the Medical Travelling Scholarship, the Post-graduate Travelling Scholarship, the French Travelling Scholarship, and the National Research Scholarships. All excepting the last-named are tenable abroad. The Research Scholarships are each of the value of £100 per annum, with laboratory fees and expenses.

So far nineteen Rhodes Scholarships have been granted, of which five have been gained by students of Auckland University College, four by students of Otago University, six by students of Victoria University College, and three by students of Canterbury College.

Of the eighteen Research Scholarships awarded up to the present one was in active operation in 1919.

University bursaries entitle the holders to the payment of tuition and examination fees (not exceeding £20 per annum) during a three (or possibly four) years' course at a University college or school of agriculture recognized by the University. The number of University bursaries held in 1919 was 450.

The number of educational bursaries under the Education Act, 1914, held in 1919 was seventy-four, of which number seven completed the three-years tenure of their bursaries

Domestic-science bursaries tenable at the Otago University may be awarded under the regulations for technical instruction.

Bursaries of this kind were awarded to sixteen students in 1919, making forty-three bursars in attendance at classes.

The Workers' Educational Association.

In the distribution to University colleges of the moneys received by the University from the National Endowment Fund in 1919, £300 was allocated to three colleges and £350 to the fourth for the establishment and maintenance of the Workers' Educational Association tutorial or University extension classes. Each college is now to receive an additional grant of £500 for the purpose. Branches of this association have been established in several of the larger towns, and tutorial classes in such subjects as economics, history, industrial law, English, electricity, debating, and chairmanship, conducted in some cases by University-college professors or lecturers, are in operation for the better education of working men and women.

Agricultural Bursaries.

Agricultural bursaries may be awarded to qualified candidates in order to enable them to obtain the necessary practical training for positions as teachers or agricultural instructors, or as farmers.

During 1919 nine bursars were in attendance at Lincoln Agricultural College, Canterbury.

Annual Examinations.

The number of candidates for the various examinations in 1919-20 who actually presented themselves in the examination-room is given below:—

Junior National and junior free places	2,170
Public Service Entrance, Senior National Scholarships, and Intermediate	3,063
Teachers' D and C	2,234
Public Service Senior	50
Kindergarten Certificate Examination	9
London University Examinations	4
Special Public Service Entrance Examination in June	189
Other examinations	20
Total	7,739

The cost of conducting all examinations was as follows:—

	£	£
Total expenses, including cost of additional temporary clerical services, but omitting other salaries		7,020
Less recoveries—		
Fees paid by candidates for teachers' certificates and others	2,564	
Contribution by Public Service Commissioner for expense of conducting Public Service examinations—		
Public Service Entrance (two examinations)	1,312	
Public Service Senior and Typists' Examinations	69	
	1,381	
		3,945
Net expenditure		£3,075

SECTION V.—DEFENCE.

The New Zealand Expeditionary Force.

The remodelling of the New Zealand defence system, outlined in the 1915 and preceding issues of the Year-book, placed the Defence Forces of the Dominion in such a position that on the outbreak of war in August, 1914, it was possible to take immediate and decisive steps to assist the other Forces of the Empire.

The total number attested into the New Zealand Expeditionary Force who left for service overseas was 3,085 officers, 550 nurses, and 96,809 other ranks.

A total of 9,924 troops were in training at the date of the Armistice. The complete number of troops and nurses provided for foreign service up to the cessation of hostilities was therefore 110,368—more than 10 per cent. of the Dominion's total mean population in 1914. A further total of 3,370 are known to have left New Zealand to serve in British and Australian Forces.

The great majority of these troops were volunteers. Of 124,211 men provided from the commencement of the war to the 12th November, 1918, 91,941 were volunteers, and 32,270 were conscripted under the Military Service Act, 1916.

"Wastage" whilst undergoing training accounted for a loss to the Force of 11,333.

Casualties.

Casualties in the Expeditionary Force were, unfortunately, very high. The total number of deaths up to 1st June, 1920, was as follows:—

Killed in action	10,245
Died of wounds	3,958
Died, other causes	2,351
Died in New Zealand before discharge	227
Total	16,781

At 31st May, 1920, some 3,057 "service" patients were still under treatment in New Zealand.

Overseas War-service Gratuity.

Section 7 of the Expeditionary Forces Amendment Act, 1918, authorized payment of "a free gift by the State in recognition of the honourable service of soldiers of the Expeditionary Forces in the present war." A scale of 1s. 6d. per diem (for period of active service) with certain limitations was prescribed by Order in Council on 19th September, 1919. Payments in New Zealand to 20th May, 1920, have been made of 88,932 gratuities aggregating £5,225,900. In addition, approximately 2,000 claims have been settled in London.

War Expenditure.

The total war expenditure to 31st March, 1920, may be summarized as follows:—

	£
General expenditure (including pay and allowances, £30,476,998)	69,800,449
Relief purposes	268,439
Repatriation	801,725
Charges and expenses of raising loans	693,215
Gratuities, New Zealand Expeditionary Force ..	4,872,485
Gratuities, Imperial and naval	45,153
Advances outstanding	471,610
Total	£76,953,076

Peace Organization of the New Zealand Military Forces.

Under the Defence Act, 1909, and its amendments, all male British subjects in New Zealand on attaining the age of fourteen years must register for military training. In the case of immigrants those who are within the ages of fourteen and twenty-five years must register within six months after their arrival in New Zealand. There are no exemptions from registration, and any person failing to comply with the law in this respect is liable to a fine of £5 and deprivation of civil rights for a period not exceeding ten years.

The posting of Cadets to Senior Cadet companies, and of individuals accepted for service (either direct or on completion of service in the Senior Cadets) to units of the Territorial Force, is carried out in June of each year.

Senior Cadets become liable for training in June of the year in which they attain the age of fourteen years, or any later date on which they cease to attend a primary school.

Persons liable for training are posted to the Territorial Force in June of the year in which they attain the age of eighteen years, or on ceasing to attend a secondary school (whichever is the later).

Members of the Territorial Force are posted to the Reserve in June of the year in which they attain the age of twenty-five years, and training in the Reserve continues until the 1st day of June in the year in which the Reservist attains the age of thirty.

The amount of obligatory training to be carried out annually is as follows:—

Territorial Force—
- (*a.*) Thirty drills (including twenty out-of-door parades).
- (*b.*) Twelve half-day or six whole-day parades.
- (*c.*) Seven days in camp.
- (*d.*) Prescribed course of musketry.

Reserve—
- Two half-day parades, or their equivalent, with a Territorial unit or company.

Senior Cadets—
- (*a.*) Fifty drills of one hour's duration, or thirty-four drills of one and a half hours' duration.
- (*b.*) Six half-day parades.
- (*c.*) Prescribed course of musketry.

Absence from compulsory parades constitutes a civil offence, and offenders are liable to a fine not exceeding £5.

The strength of the Territorial Force is limited to 30,000 men, and these are organized into units. The New Zealand Forces generally are now in process of reorganization, consequent upon lessons learnt in the recent war.

TERRITORIAL FORCE AND SENIOR CADETS.

Year.	Territorial Force.	Senior Cadets.	General Training Section.	Rifle Clubs.
1911–12 ..	22,614	..	..	..
1912–13 ..	23,919	24,770	1,370	4,003
1913–14 ..	25,902	25,332	3,729	2,577
1914–15 ..	29,447	26,446	2,075	8 770
1915–16 ..	26,839	27,063	3,437	7,928
1916–17 ..	22,174	29,832	..	7,975
1917–18 ..	22,933	30,668	..	7,252
1918–19 ..	25,626	31,109	..	6,354
1919–20 ..	30,000	31,929	328	5,523

NOTE.—The total strength of the Volunteer Forces at the end of the year 1909–10 was 14,249.

NEW ZEALAND PERMANENT FORCES.

Sufficient officers, warrant officers, non-commissioned officers, and men are permanently employed for the staffs of general headquarters and military districts, and to furnish cadres of regular troops as a nucleus of the Territorial personnel and fixed defences and field artillery. These comprise the New Zealand Staff Corps, the Royal New Zealand Artillery, the New Zealand Permanent Staff, the New Zealand Army Ordnance Corps, the New Zealand Army Pay Corps, and the New Zealand Army Medical Corps.

Under an arrangement with the Australian Government, New Zealand may send ten cadets every year to the Royal Military College of Australia at Duntroon.

The college has a staff of twenty-two, and contains barracks for 150 cadets. It is equipped with class-rooms, physical and chemical laboratories, library, riding-school, gymnasium, &c. The number of New Zealand cadets at the college at present (August, 1920) is twenty-two.

DOMINION RIFLE ASSOCIATION.

The Dominion Rifle Association was formed to encourage the members of the New Zealand Defence Forces to become efficient in the use of the rifle, and to promote rifle shooting generally as a necessary element for the defence of the Empire. It was established in 1879, the annual rifle meetings prior to that date having been conducted and controlled by the military authorities. At Trentham, near Wellington, a range accommodation of seventy-five targets with all necessary equipment and suitable buildings has been made available for the rifle championship meetings.

No meetings were held during the war period, but no time was lost in renewing these valuable competitions after the Armistice was signed.

The first post-war meeting, held in March, 1919, was largely attended and a great success.

The association receives an annual grant from the State.

Railway passes are granted to Territorials and members of rifle clubs up to a distance of 100 miles to attend rifle-shooting competitions.

Naval Defence.

By the Australian Defence Act, 1887, provision was made for the payment by New Zealand of a proportional part of the cost of the establishment and maintenance of a British Naval Force to be employed for the protection of trade in Australasian waters. Under this Act a sum of approximately £20,000 per annum was paid by New Zealand to the Imperial Government.

In 1903, consequent on the passing of the Australian and New Zealand Naval Defence Act, the annual contribution payable by New Zealand was raised to "a sum not exceeding £40,000."

By the Naval Subsidy Act, 1908, the contribution of the Dominion was again increased, this time to a sum of £100,000 payable annually for ten years from the 12th May, 1909.

The year 1909 was an important one in the history of the Dominion. At what was generally regarded as a critical period for the whole Empire New Zealand presented a battle-cruiser to the Home Government. Full information concerning this vessel and her visit to New Zealand in 1913 appears in the 1913 issue of this book (pages 932–941).

The Naval Defence Act, 1913, provides for the establishment of a New Zealand Naval Force, to be raised and maintained by voluntary enlistment only, enlistment being for a prescribed period of not less than two years. In time of war the Naval Force (including vessels acquired for defence purposes) is to be at the disposal of the British Government. The establishment of a New Zealand Royal Naval Reserve is also provided for under the Act. The third-class cruiser "Philomel" was lent by the English Admiralty to the New Zealand Government to serve as a training-ship for the forming of a nucleus of the Naval Force. The light cruiser "Chatham" has recently been presented to New Zealand by the Imperial Government.

A report on the naval defence of the Dominion was presented by Admiral of the Fleet Viscount Jellicoe of Scapa, G.C.B., O.M., G.C.V.O., on the occasion of his visit to New Zealand in August, 1919.

Training-ship "Amokura."

The "Amokura," formerly H.M.S. "Sparrow," is maintained by the New Zealand Marine Department as a training-ship for fitting boys for service in either the Navy or the mercantile marine. Boys who are taken on board must be between the ages of thirteen and a half and fifteen years. The period of training is two years.

The vessel has accommodation for sixty boys, and, since she started as a training-ship in 1907, 412 boys have been trained on her, exclusive of those now on board.

The "Amokura" has proved to be not particularly well adapted for the purposes of a training-ship, and is now laid up in harbour. Negotiations are in progress for the obtaining of a more suitable vessel.

SECTION VI.—LAW AND CRIME.

Civil Cases.

The ordinary civil jurisdiction of Magistrates' Courts is limited generally to claims not exceeding £200. Justices of the Peace may hear and decide certain civil cases when the sum in dispute does not exceed £20.

Magistrates' Courts.

Year.	Cases entered.		Cases tried.		
	Number.	Total Amount claimed.	Number.	Total Amount sued for.	Total Amount for which Judgment entered.
		£		£	£
1910	55,225	562,115	29,698	*	293,326
1911	53,394	557,158	34,627	*	296,629
1912	57,079	592,943	36,815	420,073	331,020
1913	61,759	670,925	39,086	427,484	366,981
1914	62,471	706,953	39,233	455,197	398,760
1915	60,170	695,625	37,632	446,979	383,532
1916	49,806	639,922	31,064	395,779	339,847
1917	46,004	624,693	29,412	401,568	340,958
1918	39,176	563,358	25,594	378,025	308,429
1919	38,775	619,576	24,680	385,020	319,135

* Information not available.

The number of actions commenced, cases tried, and judgments entered, together with the total amount for which judgments were recorded, in the Supreme Court of New Zealand during each of the ten years 1910-19 were as follows:—

Supreme Court: Civil Jurisdiction.

Year.	Number of Actions commenced.	Cases tried.		Judgments recorded.	
		With Jury.	Without Jury.	Number.	Amount.
					£
1910	569	52	211	193	83,427
1911	729	76	170	211	84,822
1912	755	64	233	235	102,657
1913	788	75	243	284	79,610
1914	792	95	251	281	91,286
1915	697	50	253	241	68,555
1916	673	48	193	254	78,877
1917	581	70	172	234	100,447
1918	611	47	188	226	104,927
1919	783	72	227	238	88,144

Court of Appeal.

Under the provisions of the Judicature Amendment Act, 1913, the Court of Appeal consists of two divisions, each composed of five Judges of the Supreme Court, the Chief Justice and the two senior Judges being members of both divisions. The two divisions sit separately, but may sit together to save time to determine any appeal of special difficulty or importance.

The decision of the Court must be in accordance with the opinion of a majority of the Judges present. Certain proceedings may by order of the Supreme Court be removed to the Court of Appeal. The decision of the Court of Appeal is final as regards the tribunals of New Zealand, but the Court may, in civil proceedings, give leave to either party to appeal to the Privy Council. In criminal cases any party may appeal to the Court of Appeal.

Year.	Crown Criminal Cases.		Civil.				
			Appeals.		Cases removed.		
	Number.	Convictions affirmed.	Number.	Allowed.	Number.	Judgments for Plaintiffs.	Judgments for Defendants.
1915 ..	4	3	14	7	14	11	3
1916 ..	4	1	16	6	6	3	3
1917 ..	4	4	11	4	12	8	4
1918 ..	5	3	11	5	7	5	2
1919 ..	6	2	13	9	6	2	4

BANKRUPTCY.

Under the Bankruptcy Act, 1908—a consolidation of the then existing laws—a person may seek the protection of the Court by filing a petition with a declaration of insolvency, or one or more creditors may petition the Court to have a debtor declared insolvent.

Year.	Petitions by Debtors.	Adjudications on Petitions by Creditors.	Cases in which Composition accepted.	Orders of Immediate Discharge granted.	Cases in which Orders of Discharge were suspended.
1915 ..	250	44	..	55	18
1916 ..	267	37	..	63	21
1917 ..	221	44	1	60	10
1918 ..	133	61	1	53	9
1919 ..	109	32	1	128	13

Private assignments and compositions are not registered, and particulars respecting this class of insolvency are not procurable.

Year.	Number of Bankruptcies.	Debtors' Statements of Assets, excluding Amounts secured to Creditors.	Amounts realized by Official Assignees.	Amount of Debts proved.	Amounts paid in Dividends and Preferential Claims.
		£	£	£	£
1915 ..	294	92,876	63,310	153,926	42,374
1916 ..	304	123,441	56,416	172,774	29,223
1917 ..	265	138,696	63,645	178,244	27,405
1918 ..	164	50,356	67,729	88,607	33,176
1919 ..	141	43,627	54,662	59,767	24,980

Of the 141 bankruptcies in 1919: in 5 cases the liabilities were under £50; in 16, from £50 to £100; in 46, from £100 to £250; in 33, from £250 to £500; in 24, from £500 to £1,000; in 13, from £1,000 to £2,000; and in 4, from £2,000 to £5,000.

As regards occupations, some 34 were described as employers, 51 were working on their own account, and 56 were employees.

Divorce.

During the year 1919 an abnormally large number — viz., 675 — of petitions for dissolution of marriage were filed, this number including 8 petitions for nullity of marriage. In 395 of these cases a decree *nisi* was granted, 160 of these being made absolute during the year. In addition, decrees *nisi* were granted in respect of 84 petitions filed in previous years, 72 of these being made absolute before the end of the year, and 104 decrees *nisi* of previous years became absolute. The total number of decrees *nisi* for the year was thus 479, which includes 5 decrees for nullity of marriage.

In addition, 5 petitions for judicial separation were filed, and 1 decree granted, while 2 applications for restitution of conjugal rights were made, both of which are still pending.

The subject of the next table is the duration of the marriage for dissolution of which petitions were filed in the past four years.

Duration of Marriage, in Years.	Husbands' Petitions.				Wives' Petitions.			
	1919.	1918.	1917.	1916.	1919.	1918.	1917.	1916.
Under 1	3	1	1	2	..	2	1	2
1 and under 2 ..	4	3	6	2	1	3	3	..
2 „ 3 ..	20	7	3	3	3	2	2	3
3 „ 4 ..	25	7	7	5	7	3	4	3
4 „ 5 ..	14	10	5	7	20	5	5	1
5 „ 10 ..	96	46	35	47	106	42	39	48
10 „ 15 ..	70	61	25	27	101	56	36	34
15 „ 20 ..	54	30	28	24	58	39	29	34
20 „ 30 ..	27	14	11	13	48	35	30	22
30 „ 40 ..	5	6	2	4	3	7	8	4
40 and over ..	..	..	2	1	..	1	..	3
Not stated ..	8	..	..	..	2	..	..	..
Totals ..	326	185	125	135	349	195	157	154

A table is given showing the chief grounds of petitions, in combination with particulars as to number of living issue. Columns are added showing for the various grounds the sex of the petitioner.

Grounds.	Petitioner.		Number of Cases in which Number of Living Issue was							Total Number of Cases.
	Husband.	Wife.	0	1	2	3	4	5	6 or over.	
Adultery	237	151	130	97	80	44	19	9	9	388
Bigamy*	2	3	5	..	..	..	..	..	..	5
Cruelty	..	7	2	1	1	2	..	1	..	7
Desertion (alone) ..	78	130	66	51	47	16	14	9	5	208
Desertion and drunkenness	..	5	2	1	1	..	..	..	1	5
Drunkenness (alone) ..	3	29	7	6	9	5	3	1	1	32
Drunkenness and cruelty	..	9	1	2	1	3	1	..	1	9
Other or not stated† ..	6	15	6	7	1	2	1	2	2	21
Totals ..	326	349	219	165	140	72	38	22	19	675

* "Nullity" cases. † Including one "nullity" case.

POLICE.

On the 31st March, 1920, the number of permanent members of the Police Force in New Zealand was 844 of all ranks, being an increase of 53 during the year. The total is made up as follows: 4 superintendents, 11 inspectors, 6 sub-inspectors, 31 senior sergeants, 83 sergeants, 671 constables, 7 senior detectives, 16 detective-sergeants, and 15 detectives. There were also 4 police surgeons, 7 matrons, 7 district constables, and 5 Native constables.

In addition to the above, there were 72 temporary constables appointed under section 2 of the Police Force Amendment Act, 1919, 40 of whom were recruits undergoing a period of probationary service with a view to permanent appointment.

The following table shows the number of stations and of police in each police district:—

Police District.	No. of Stations.	No. of Police.	Police District.	No. of Stations.	No. of Police.
Auckland ..	52	187	Greymouth ..	22	39
Hamilton ..	36	68	Christchurch ..	37	116
Napier ..	28	64	Timaru ..	13	34
Wanganui ..	28	55	Dunedin ..	35	92
Palmerston North	17	40	Invercargill ..	22	41
Wellington ..	35	168			

There were also 7 attached to headquarters, 1 has been lent to the Cook Islands Administration, 2 lent to Samoan Administration, and two were on leave prior to retirement.

The proportion of police to population is 1 to every 1,325 persons, and the expenditure (exclusive of the cost of buildings) on the whole Police Force for the year ended the 31st March, 1920, was 4s. 11¾d. per head of population.

The following table shows the growth of the Police Force since 1878, prior to which each province had its own Police Force, and reliable data are not available:—

Year ended 31st March.	Officers.	Non-commissioned Officers.	Detectives.	Constables.	Total.	Police to Population (including Maoris).	Cost per Inhabitant.
							s. d.
1878 ..	25	90	14	329	458	1 to 944	..
1885 ..	20	65	17	372	474	1 to 1,293	3 0¾
1890 ..	12	66	13	403	494	1 to 1,346	2 10¾
1895 ..	7	51	13	416	487	1 to 1,495	2 6¾
1900 ..	11	56	20	499	586	1 to 1,359	2 10¾
1905 ..	12	65	25	553	655	1 to 1,375	2 10¼
1910 ..	16	86	34	639	775	1 to 1,330	3 3½
1916 ..	19	104	36	757	916	1 to 1,258	4 2¾
1917 ..	20	108	36	734	898	1 to 1,280	4 3
1918 ..	20	111	38	732	901	1 to 1,274	4 6½
1919 ..	20	112	41	705	878	1 to 1,319	5 2½
1920 ..	21	114	38	743	916	1 to 1,325	4 11¾

The proportion of police to population is much lower in New Zealand than in any of the Australian States, and the cost of police per inhabitant is, as might be expected, also lower in New Zealand than in the Commonwealth. If, however, the proportion of police to population were the same in each of the Australian States as in New Zealand, the cost per inhabitant would be higher in the Dominion than in any of the States.

Criminal Cases before Magistrates.

Charges.

The total number of charges brought before Magistrates in 1919, and number of convictions obtained, are shown in the following table:—

How brought before Magistrate.	Arrested or summoned.		Convicted.	
	Total Offences, including Multiple Charges.	Distinct Arrests or Summonses, excluding Multiple Charges.	Total Summary Convictions, including Multiple Charges.	Distinct Summary Convictions, excluding Multiple Charges.
By arrest ..	15,009	11,408	13,106	10,424
By summons ..	25,438	21,783	19,586	17,164
Totals ..	40,447	33,191	32,692	27,588

If the Maoris be excluded the number of charges in 1919 is found to have been 38,221, an increase of 3,539 upon the number for 1918; and the proportion per 1,000 of population 33·63, as against 31·44.

Summary Convictions.

Summary convictions in 1919 numbered 32,692, including 1,935 recorded against Maoris. In respect of 519 charges (34 of which were against Maoris) the accused were committed for sentence. Commitments for trial at the Supreme Courts numbered 564 (including 41 charges against Maoris).

Dealing with the summary convictions for all offences, the figures for 1910 and onward (excluding the Maoris) are,—

Year.	Offences against the Person.		Offences against Property.		Other Offences.		Totals.	
	Total Number.	Per 1,000 Mean Population.	Total Number.	Per 1,000 Mean Population.	Total Number.	Per 1,000 Mean Population.	Number.	Per 1,000 Mean Population.
1910 ..	655	0·66	2,080	2·09	29,245	29·47	31,980	32·22
1911 ..	654	0·64	2,146	2·11	29,239	28·81	32,039	31·56
1912 ..	595	0·57	2,407	2·32	31,984	30·78	34,986	33·67
1913 ..	646	0·60	2,852	2·67	35,250	32·99	38,748	36·26
1914 ..	726	0·67	2,740	2·51	36,944	33·88	40,410	37·06
1915 ..	628	0·57	2,579	2·35	35,012	31·85	38,219	34·76
1916 ..	618	0·56	2,360	2·15	31,218	28·39	34,196	31·10
1917 ..	588	0·54	2,315	2·11	29,868	27·17	32,771	29·82
1918 ..	525	0·48	2,321	2·10	24,988	22·65	27,834	25·23
1919 ..	671	0·59	2,978	2·62	27,108	23·85	30,757	27·06

In dealing with the summary convictions in the Magistrates' Courts, in the above table each offence is reckoned as a distinct person. Of recent years there has been a tendency for the rates to decline, but this has been offset by the increase in prosecutions for offences not strictly criminal in character.

Of the 671 summary convictions for offences against the person in 1919 the greater number were on account of common (616) and aggravated (10) assaults. There were also 42 convictions for attempt to commit suicide.

Of offences against property, theft (not otherwise described) is the most common, showing 2,022 summary convictions during 1919. There were, besides, 125 for fraud and false pretences; 221 for housebreaking; and 550 for wilful damage to property. These are the principal items only.

Under the heading "Other Offences" (those relating to good order included) drunkenness comes first with 7,656 summary convictions, of which 475 were in respect of females. These figures cover, besides drunkenness only, drunkenness with disorderly conduct and habitual drunkenness. Prohibition orders numbered 1,781, including 140 made against women. The subject of drunkenness is specially dealt with under a separate heading.

Further offences against good order include 3,807 summary convictions simply defined as for "breach of by-laws"; 813 for obscene, threatening, or abusive language; 555 for indecent, riotous, or offensive conduct; and 253 for assaulting or resisting the police. Under "Vagrancy" there were 390 summary convictions, including 94 against women. The chief items only are referred to above.

Convictions of Persons arrested.

Information in connection with charges brought before Magistrates is obtained on cards, and it is possible to give particulars in regard to the ages and birthplaces of persons arrested. Ages and birthplaces in summons cases are not obtainable.

From the following table it will be seen that of the total convictions in 1919 of persons arrested (12,430) the distinct arrests amounted to 9,941, the difference being accounted for by multiple charges against the same person. If distinct persons only are taken this total is further reduced to 7,760, representing 6·82 for every 1,000 of the mean population. Convictions of Maoris are not included.

Convictions on Arrest, 1919.

Offences against	Total Convictions, including Multiple Charges.	Distinct Convictions, excluding Multiple Charges.	Distinct Persons convicted, most Serious Offence recorded.	Proportion of Distinct Persons convicted per 1,000 of Mean Population.
The person	322	284	254	0·22
Property	1,943	1,167	1,019	0·90
Good order	9,180	7,847	6,403	5·63
Other offences	985	643	84	0·07
Total	12,430	9,941	7,760	6·82

The offences and sentences for convictions in arrest and summons cases (including multiple charges) are shown below. Cases concerning Maoris are not included.

Offences against	Convicted and discharged or ordered to come up for Sentence	Fined.	Imprisoned.	Other.	Total Convictions.
The person	161	384	97	29	671
Property	1,148	699	477	654	2,978
Good order	3,109	9,567	1,064	1,988	15,728
Other offences ..	1,248	8,067	696	1,369	11,380
Totals	5,666	18,717	2,334	4,040*	30,757

*Including 265 released under the First Offenders' Probation Act, 318 committed to industrial schools, 30 whipped, 50 bound over, and 3,254 against whom an order was made.

Juvenile Offenders.

Included in the figures of total charges and convictions for the year 1919 are a number dealing with offences committed by juvenile offenders—*i.e.*, persons under or apparently under the age of sixteen.

JUVENILE OFFENDERS, 1919.

Class of Offence.	Charges.	Dismissed or discharged.	Committed for Sentence or Trial.	Summary Convictions.
Against the person	14	9	1	4
Against property	1,536	719	19	798
Against good order	121	49	..	72
Other	88	36	..	52
Totals	1,759	813	20	926

Of the 926 convictions, in 152 cases the offender was discharged, in 250 ordered to come up for sentence, in 89 released on probation, and in 305 committed to an industrial school.

CRIMINAL CASES IN SUPREME COURTS.

In 1919 the total number of cases coming before the Supreme Court was 1,112, and this included 437 cases sent from Magistrates' Courts for sentence. Maoris are included in these numbers.

Of 646 indictments and informations (excluding Maoris), 347 resulted in convictions being obtained. For Maoris the total was 29, resulting in 24 convictions.

Dealing now with distinct persons, it is found that the total indicted during the year was 388, including 28 Maoris; of these, 236 were convicted, including 24 Maoris. The distinct persons sent up from Magistrates' Courts for sentence numbered 225, inclusive of 18 Maoris.

The following summary shows the number of distinct persons (Maoris excluded) convicted in Supreme Courts during the last decade:—

SUPREME COURTS.—PERSONS CONVICTED, ETC., 1910–19.

Year.	Offences against the Person.	Offences against Property.	Forgery and Offences against the Currency.	Other Offences.	Total Convictions.	Number committed for Sentence included in previous Columns.
1910 ..	89	301	54	34	478	243
1911 ..	88	245	34	36	403	185
1912 ..	105	225	44	21	395	185
1913 ..	123	194	44	21	382	171
1914 ..	90	258	57	47	452	192
1915 ..	95	233	52	32	412	212
1916 ..	101	204	47	21	373	190
1917 ..	116	181	37	28	362	178
1918 ..	74	175	40	21	310	183
1919 ..	104	251	29	35	419	203

Sentences of Criminals in Supreme Courts, 1919.

Particulars of sentences (distinct persons) are,—

Sentence.	Excluding Maoris.	Including Maoris.
Imprisonment (only) with or without hard labour ..	130	139
Imprisonment and declared habitual criminal ..	17	18
Imprisonment and reformative detention	8	9
Reformative detention (only)	118	133
Fined	27	29
Released on probation	67	75
Ordered to come up for sentence	50	56
Held on bail	2	2
Totals	419	461

Drunkenness.

The number of convictions for breaches of the licensing laws by publicans and for selling liquor without a license, during the past five years, was as shown in the following statement. Offences by Maoris are not included.

Year.	Convictions for	
	Breaches of Licensing Laws by Publicans.	Selling Liquor without a License.
1915	171	142
1916	223	102
1917	452	132
1918	360	73
1919	486	38

The number of convictions for drunkenness and drunkenness with disorderly conduct during 1919 (exclusive of convictions against Maoris) totalled 7,181 against males and 475 against females. In addition there were 411 convictions against Maoris—398 against males and 110 against females.

Convictions for Drunkenness (exclusive of Maoris), 1910–19.

Year.	Convictions recorded against.			Per 1,000 of Mean Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1910 ..	10,808	805	11,613	20·58	1·72	11·70
1911 ..	10,559	841	11,400	19·74	1·75	11·23
1912 ..	10,688	843	11,531	19·56	1·71	11·10
1913 ..	10,815	783	11,598	19·27	1·54	10·85
1914 ..	12,133	1,012	13,145	21·34	1·94	12·06
1915 ..	12,010	952	12,962	21·22	1·78	11·79
1916 ..	9,937	765	10,702	18·01	1·40	9·73
1917 ..	7,971	606	8,577	14·66	1·09	7·83
1918 ..	6,467	532	6,999	11·98	0·94	6·35
1919 ..	7,181	475	7,656	12·69	0·83	6·74

Repeated charges against the same person are included in the totals shown in the previous table. Dealing with arrests only (males, 6,890; females, 462: total 7,352), but excluding Maoris, it is found that the number of distinct persons convicted of this offence was 4,879 (4,656 males and 223 females), or 66·36 per cent. of the total "arrest" convictions (excluding Maoris) for drunkenness.

Offences for which convictions were entered against persons arrested (and convicted) at the same time for drunkenness numbered 1,212. The principal were: Assault, 70; wilful damage, 103; indecent or offensive conduct, 104; obscene or abusive language, 268; assaulting or resisting police, 98.

A calculation of the amount of alcoholic liquor consumed per head of mean population during the past five years is given below:—

CONSUMPTION OF BEER, WINE, AND SPIRITS PER HEAD OF MEAN POPULATION.

	Including Maoris.			Excluding Maoris.		
	Beer. Gal.	Wine. Gal.	Spirits. Gal.	Beer. Gal.	Wine. Gal.	Spirits. Gal.
1915	9·455	0·142	0·818	9·883	0·148	0·856
1916	9·987	0·121	0·678	10·439	0·126	0·709
1917	9·937	0·124	0·661	10·387	0·130	0·691
1918	9·213	0·109	0·502	9·629	0·114	0·524
1919	11·704	0·147	0·581	12·216	0·153	0·606

The quantity of each kind of alcoholic liquor used in the Dominion during the same period was as follows:—

	Beer for Consumption. Gal.	Wine for Consumption. Gal.	Spirits for Consumption. Gal.
1915	10,865,764	163,244	940,611
1916	11,477,041	138,757	779,698
1917	11,416,475	142,859	759,118
1918	10,621,229	126,122	578,177
1919	13,882,286	174,333	688,632

CRIME AMONGST MAORIS.

The number of summary convictions of Maoris brought before Magistrates' Courts for the past five years is shown in the following table:—

Year.	Offences.					
	Against the Person.	Against Property.	Against Good Order.		Other Offences.	Total.
			Drunkenness.*	Other.		
1915	69	187	422	405	373	1,456
1916	44	152	296	393	378	1,263
1917	50	185	320	373	490	1,418
1918	66	190	297	407	458	1,418
1919	150	272	411	620	482	1,935

* Including drunkenness with disorderly conduct.

Distinct Maoris convicted after arrest in 1919 numbered 485. The ages of these are given in the following table in combination with information as to class of offence:—

AGES AND OFFENCES OF DISTINCT MAORIS CONVICTED (ARRESTS ONLY), 1919.

Offences against	Under 20.	20 and under 25.	25 and under 30.	30 and under 40.	40 and over.	Unspecified.	Totals.
The person ..	1	20	12	5	3	4	45
Property	46	34	13	8	5	5	111
Good order ..	27	69	57	50	101	14	318
Other offences ..	1	2	4	1	2	1	11
Totals ..	75	125	86	64	111	24	485

The number of Maoris convicted in the higher Courts in 1919 was 42, including 18 who had been committed for sentence by the lower Courts.

PRISONS AND PRISONERS.

The following table gives for the year 1919 the prison accommodation, the number of prisoners received, the number in prison at end of year, and the daily average number in confinement:—

Name of Prison.	Number for whom there is Accommodation.	Number received during Year.	Number in Confinement at End of Year.	Daily Average Number in Confinement.
Auckland ..	311	959	209	222·46
Kaingaroa ..	62	36	35	44·94
Waikeria ..	133	92	86	110·30
New Plymouth ..	58	65	51	47·95
Roto-aira ..	53	59	47	42·62
Napier	74	171	11	17·43
Wellington ..	225	1,058	121	126·84
Wi Tako ..	27	28	23	19·68
Addington ..	35	50	36	38·95
Lyttelton ..	105	369	9	24·89
Paparua ..	181	149	98	117·02
Invercargill ..	167	145	165	160·79
Minor prisons ..	191	835	29	30·47
Totals ..	1,622	4,016	920	1004·34

The total number of prisoners received in the different gaols during the year 1919 was 4,016 (males 3,731, females 285), as compared with 3,807 (males 3,517, females 290) in 1917, counting each admission as a distinct person.

Omitting those received by transfer from another prison, 809 (males 784, females 25), the debtors and lunatics received, 68 (males 63, females 5), and duplicate receptions of the same prisoner on the same charge, 57 (males 55, females 2), it is found that the total receptions for criminal offences during 1919 were 3,122 (males 2,867, females 255). In this total are included 40 persons (males 38, females 2) on remand or awaiting sentence from the year 1918.

The number of prisoners in gaol (including Maoris) at the end of each of the past five years, and the proportion per 10,000 of population as at the 31st December, is given in the next table:—

PRISONERS IN GAOL (31ST DECEMBER).

Year.	Number of Prisoners.			Proportion per 10,000 of Population.	
	Undergoing Sentence.	On Remand and awaiting Trial, &c.	Total.	Undergoing Sentence.	Total in Confinement
1915 ..	941	57	998	8·53	9·05
1916 ..	836	54	890	7·60	8·09
1917 ..	954	53	1,007	8·32	8·78
1918 ..	1,005	42	1,047	8·68	9·04
1919 ..	852	68	920	7·02	7·58

The actual number of distinct convicted prisoners received in the various gaols during the year 1919 (excluding Maoris) was 1,725.

These figures do not include children committed to the industrial schools simply on the ground that they are neglected or destitute.

In classifying the offences a prisoner convicted of more than one offence during the year is reckoned once only, under the heading of the principal offence. Debtors and lunatics received into gaol are omitted.

AGES AND OFFENCES OF DISTINCT CONVICTED PRISONERS (EXCLUDING MAORIS) RECEIVED INTO PRISON DURING 1919.

Age, in Years.	Offences against the Person.			Theft and other Offences against Property.	Offences not included previously.			Totals.
	Sexual Offences.	Assaults.	Other.		Vagrancy.	Drunkenness.	Other.	
Under 21 ..	7	8	..	91	8	..	31	145
21 and under 25	2	10	1	70	3	10	61	157
25 " 30	5	19	3	68	4	8	89	196
30 " 35	4	18	2	65	19	21	110	239
35 " 40	9	15	3	77	23	46	105	278
40 " 45	5	10	..	44	22	43	80	204
45 " 50	6	4	1	34	27	43	74	189
50 " 55	4	2	..	21	20	37	40	124
55 " 60	4	2	1	8	10	24	26	75
60 " 65	2	..	..	5	8	23	23	61
65 and over ..	3	1	..	5	17	15	14	55
Not stated ..	..	..	..	1	1	..	..	2
Totals ..	51	89	11	489	162	270	653	1,725

Out of these 1,725 prisoners, 723 had not suffered any previous conviction. The remaining 1,002 were apportioned—one previous conviction, 231; two, 130; three, 99; four, 67; five and over, 475.

It must be understood that the actual number of imprisonments was much in excess of the figures given above, as many persons were several times imprisoned either for offences differing in kind or for repetitions of the same offence.

New-Zealand-born Prisoners.

New-Zealand-born over fifteen years of age formed at the 1916 census 60 per cent. of the total population above that age; but New-Zealanders constituted only 44·99 per cent. of the total number received in gaols in 1919.

First Offenders' Probation Act.

Two hundred and twenty-six persons were placed on probation in the year 1919, as against 192 in 1918 and 127 in 1917.

Tree-planting by Prison Labour.

Afforestation by prison labour is now carried on at one camp only—viz., at Kaingaroa, which is situated about 33 miles from Rotorua, on the Kaingaroa Plains. During the past year the camp has been largely used as a place of detention for military court-martialled prisoners, the greater part of the tree-planting work for the year having been carried out by them.

The number of trees planted in the neighbourhood of Kaingaroa for the year ended 31st March, 1919, was 1,418,975, while the total number of trees planted throughout the Dominion by prison labour since the inception of the afforestation scheme in 1901 is 39,797,475.

The total labour value of the prisoners' work during the period since 1901 to March, 1919, as estimated by the Forestry Department, is £63,753.

Prisons Board.

For the purposes of the Crimes Amendment Act of 1910 there is constituted a Prisons Board, at present consisting of the Chief Justice as President, and six other members.

In the ten years that the Board has been in existence no fewer than 1,288 persons have been sentenced to reformative detention. Seventy-one per cent. of these were released on the Board's recommendation, while of those released some 83 per cent. are not known to have again offended.

Much less favourable are the statistics of habitual criminals, of whom there were 261 declared in the period dealt with. Eighty-four per cent. were released, but more than half (56 per cent.) of these relapsed into criminal ways.

Inquests.

The number of bodies on which inquests were held in 1919 was 1,456. The verdicts given at the inquests may be classified as under:—

Nature of Verdict.	Inquests on Persons.		
	Males.	Females.	Totals.
Disease and natural causes ..	528	260	788
Accident	430	91	521
Homicide	4	1	5
Suicide	112	30	142
	1,074	382	1,456

Of the accidental deaths drowning is one of the most common forms. The verdicts show that 130 deaths were due to this cause, giving a percentage of 24·95 of the accidental deaths from all causes.

The inquests on suicidal deaths in 1919 show an increase on the number for the previous year. The figures for each of the past ten years were,—

Year.	Inquests on Suicides.			Year.	Inquests on Suicides.		
	Males.	Females.	Totals.		Males.	Females.	Totals.
1910 ..	90	16	106	1915 ..	112	12	124
1911 ..	109	25	134	1916 ..	122	28	150
1912 ..	111	15	126	1917 ..	104	30	134
1913 ..	118	33	151	1918 ..	99	22	121
1914 ..	116	27	143	1919 ..	112	30	142

Fire Inquests.

In case of fire causing the destruction of any building, ship, or merchandise, or any stack of grain, pulse, or hay, or any growing crop, a Coroner may hold an inquiry into the cause of such fire, the procedure being similar to that of inquests into cause of death.

The inquests on fires held during 1919 numbered nine. In one case the verdict was arson, in a second accident, and in the remaining seven cases no evidence was forthcoming.

Gaming and Lotteries.

The number of charges laid in the Magistrates' Courts for breaches of the gaming laws, and the manner in which such charges were disposed of, are shown for five years in the table following. Maoris are not included.

Year.	Number of Charges.	Discharged or dismissed.	Convictions recorded.
1915	217	54	163
1916	286	60	226
1917	336	117	219
1918	278	73	205
1919	313	101	212

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SECTION VII.—REPRESENTATION AND ELECTORAL.

LEGISLATIVE authority in New Zealand is centred in a Parliament of two Houses, the House of Representatives and the Legislative Council. The latter body has at present some thirty-seven members, who are appointed, with the exception of one life member, for a period of seven years. Provision is made by the Legislative Council Act, 1914, for the ultimate creation of an elective Upper Chamber, but the date on which the Act is to commence has yet to be fixed.

The House of Representatives is composed of seventy-six members for "European" electorates and four for Maori constituencies. With certain minor exceptions, any registered elector, male or female, is eligible for election. The franchise is a broad one, covering all male or female adults of British nationality by birth or by naturalization in New Zealand who have resided in the Dominion for a minimum of twelve months.

THE GENERAL ELECTION OF 1919.

The normal life of Parliament is three years, but owing to extraordinary circumstances the duration of the last Parliament was extended to five. A general election was held in December, 1919: for Maori representatives on the 16th, for European representatives on the 17th. Dealing with the latter election only, it is found that out of a total roll number of 683,420 some 550,327 (80·53 per cent.) persons exercised their vote. A summary for the last five general elections is as follows:—

Year of General Election.	Estimated Total Adult Persons.	Number on Rolls.	Proportion per Cent. of Adult Persons registered as Electors.	Number of Persons who voted.	Proportion per Cent. of Persons on Rolls who voted.
1905 ..	500,108	476,473	95·28	396,657	83·25
1908 ..	538,950	537,003	99·64	428,648	79·82
1911 ..	594,532	590,042	99·24	486,100	83·67
1914 ..	641,768	616,043	95·99	521,525	84·66
1919 ..	675,415	683,420*	*	550,327	80·53

* This excess of roll number over total population may be explained thus: The population quoted is the *de facto* population actually in the country; the roll number includes many soldiers still abroad. Further, many thousands of deceased soldiers and others had not been removed from the rolls owing to lack of proof of death.

The relative interest in the poll evinced by males and females may be measured by the percentage of votes recorded to the number on the roll—viz., males 81·45 per cent., females 79·52 per cent.

Informal votes cast numbered 7,587, or 1·38 per cent. of all votes recorded.

Valid votes for successful candidates totalled 279,373 (51·47 per cent.); for defeated candidates, 263,367, or 48·53 per cent. A statement of the voting in individual electorates follows.

RESULT OF GENERAL ELECTION, 1919.

Electoral Districts and Names of Candidates.	Number of Votes recorded	Number of Electors on Roll.	Population at Census, 1916.
Bay of Islands—			
Reed, V. H. ..	3,066		
Jounneaux, St. C.	1,871		
Informal ..	56		
	4,993	6,344	13,455
Marsden—			
Mander, F. ..	2,307		
Murdoch, A. J. ..	2,118		
McLean, D. A. ..	850		
Curtis, A. H. ..	604		
Informal ..	108		
	5,987	7,606	14,229
Kaipara—			
Coates, J. G. ..	4,214		
Gregory, A. ..	923		
Informal ..	198		
	5,335	6,871	13,624
Waitemata—			
Harris, A. ..	4,911		
Greenslade, A. E.	3,492		
Informal ..	119		
	8,522	10,211	17,002
Eden—			
Parr, C. J. ..	3,431		
McBrine, O. ..	1,577		
Hornblow, R. E.	1,500		
Informal ..	93		
	6,601	7,888	14,637
Auckland East—			
Myers, A. M. ..	3,718		
McKenzie, C. N...	3,560		
Way, R. F. ..	1,756		
Informal ..	146		
	9,180	10,959	17,013
Auckland Central—			
Parry, W. E. ..	4,007		
Glover, A. E. ..	3,221		
Thomas, J. J. ..	1,023		
Informal ..	106		
	8,357	9,777	16,888
Auckland West—			
Savage, M. J. ..	4,008		
Bennett, F. ..	3,475		
Entrican, A. J. ..	1,493		
Informal ..	83		
	9,059	10,599	17,366
Grey Lynn—			
Bartram, F. N. ..	3,141		
Melville, Miss E...	2,660		
Fowlds, G. ..	2,405		
Garmston, L. J. F.	214		
Richardson, P. ..	180		
Informal ..	118		
	8,718	10,130	17,203
Roskill—			
Potter, V. H. ..	4,200		
Gunson, J. H. ..	2,346		
Davis, G. ..	1,998		
Peddle, F. W ..	728		
Informal ..	95		
	9,367	10,996	17,217
Parnell—			
Dickson, J. S. ..	5,706		
Bloodworth, T. ..	2,287		
Baume, Mrs. R. L.	1,026		
Informal ..	110		
	9,129	11,985	16,911
Manukau—			
Lang, F. W. ..	4,182		
Mason, H. G. R...	2,304		
Major, E. E. ..	1,173		
Informal ..	87		
	7,746	9,422	15,751
Franklin—			
Massey, W. F. ..	4,195		
Rea, J. ..	1,165		
Piggott, E. ..	637		
Informal ..	134		
	6,131	7,815	13,419
Raglan—			
Bollard, R. F. ..	2,888		
Jordan, W. J. ..	1,900		
Johnstone, C. ..	756		
Informal ..	64		
	5,608	7,214	12,998
Thames—			
Rhodes, T. W. ..	3,078		
McCormick, W. J.	1,488		
Purtell, J. ..	965		
Cooke, Mrs. A. A. M	72		
Long, T. ..	56		
Informal ..	75		
	5,734	6,807	13,779

Electoral Districts and Names of Candidates.	Number of Votes recorded.	Number of Electors on Roll.	Population at Census, 1916.
Ohinemuri—			
Poland, H. ..	3,173		
Clark, J. ..	2,618		
Informal ..	52		
	5,843	7,431	14,134
Tauranga—			
Herries, W. H. ..	3,946		
Bobbins, B. C. ..	2,086		
Informal ..	118		
	6,150	9,019	12,988
Waikato—			
Young, J. A. ..	4,869		
Watts, P. H. ..	1,976		
Lafferty, C. ..	766		
Informal ..	121		
	7,732	10,019	14,912
Rotorua—			
Hockly, F. F. ..	3,258		
Carney, M. ..	1,525		
Jones, G. T. ..	854		
Hewitt, W. C. ..	497		
Keegan, P. ..	324		
Informal ..	86		
	6,544	8,007	13,115
Bay of Plenty—			
MacDonald, W. D. S.	3,546		
Williams, K. S. ..	2,312		
Informal ..	66		
	5,924	8,486	13,281
Waitomo—			
Jennings, W. T. ..	2,906		
Wilson, K. C. ..	2,529		
Elliott, G. ..	332		
Informal ..	159		
	5,926	7,546	13,407
Gisborne—			
Lysnar, W. D. ..	3,041		
Carroll, J. ..	2,668		
Brindle, T. ..	2,312		
Informal ..	114		
	8,135	11,678	15,881
Hawke's Bay—			
Campbell, H. M. ..	3,234		
McKay, G. ..	2,292		
Chapman, C. H. ..	2,176		
Informal ..	86		
	7,788	10,675	15,480
Napier—			
Brown, J. V. ..	2,763		
Evans, F. C. ..	2,709		
Hill, H. ..	2,562		
Informal ..	161		
	8,195	10,084	16,623
Waipawa—			
Hunter, G. ..	3,458		
Jull, A. E. ..	3,184		
Informal ..	72		
	6,714	7,884	13,721
Pahiatua—			
McNicol, A. ..	2,775		
Ross, R. B. ..	2,603		
Rice, R. S. L. ..	1,142		
Informal ..	51		
	6,571	7,900	14,325
Masterton—			
Sykes, G. R ..	2,444		
Holms, A. C. ..	2,100		
McLeod, A. ..	1,730		
Matheson, W. B.	791		
Informal ..	43		
	7,108	8,238	14,653
Wairarapa—			
McLeod, A. D. ..	3,266		
Hornsby, J. T. M.	2,726		
Danahey, C. J. ..	199		
Informal ..	102		
	6,293	7,634	12,957
Stratford—			
Masters, R. ..	3,118		
Hine, J. B. ..	3,057		
Informal ..	50		
	6,225	7,302	13,663
Taranaki—			
Smith, S. G. ..	4,287		
Buckeridge, G. H.	3,264		
Informal ..	79		
	7,630	8,651	14,959
Egmont—			
Hawken, O. J. ..	3,123		
Astbury, D. L. A.	2,932		
Informal ..	49		
	6,104	7,478	13,043
Patea—			
Powdrell, W. D. ..	3,276		
Morrison, W. ..	3,021		
Fitzherbert, P. B.	458		
Pearce, G. V. ..	144		
Informal ..	154		
	7,053	8,892	13,738
Wanganui—			
Veitch, W. A. ..	4,340		
Cuttle, W. J. ..	2,637		
McIlvride, L. ..	1,266		
Informal ..	77		
	8,320	10,503	15,712

Electoral Districts and Names of Candidates.	Number of Votes recorded.	Number of Electors on Roll.	Population at Census, 1916.
Waimarino—			
Smith, R. W. ..	3,116		
Langstone, F. ..	2,473		
Informal ..	79		
	5,668	7,506	13,014
Grona—			
Guthrie, D. H. ..	3,891		
Tunnicliffe, E. J.	2,048		
Informal ..	191		
	6,130	7,841	13,843
Manawatu—			
Newman, E. ..	3,025		
Hillier, A. C. ..	2,159		
Informal ..	68		
	5,252	6,622	12,973
Rangitikei—			
Glenn, W. S. ..	2,903		
Brady, F. P. ..	2,268		
Meldrum, W. ..	1,655		
Informal ..	75		
	6,901	9,054	14,393
Palmerston—			
Nash, J. A. ..	4,617		
Ayrton, M. ..	3,613		
Informal ..	173		
	8,403	10,536	16,078
Otaki—			
Field, W. H. ..	2,820		
McKenzie, J. ..	1,588		
MacDonald, E. ..	407		
Isherwood, A. J. R.	198		
Informal ..	146		
	5,159	6,578	13,373
Hutt—			
Wilford, T. M. ..	3,422		
Pritchard, D. K.	2,417		
Rishworth, E. P.	2,319		
Informal ..	68		
	8,226	9,983	16,247
Wellington North—			
Luke, J. P. ..	3,999		
Browne, H. O. ..	2,934		
Read, J. ..	2,345		
Informal ..	86		
	9,364	11,954	17,159
Wellington Central—			
Fraser, P. ..	4,486		
Pirani, F. ..	3,430		
Informal ..	146		
	8,062	10,551	17,255
Wellington East—			
Newman, A. K. ..	4,375		
Monteith, A. L. ..	3,317		
McKenzie, L. S. W.	2,441		
Informal ..	94		
	10,227	12,705	17,113
Wellington South—			
Mitchell, G. ..	4,801		
Semple, R. ..	3,375		
Informal ..	103		
	8,279	10,122	17,330
Wellington Suburbs—			
Wright, R. A. ..	4,091		
Croskery, A. W.	2,964		
Sloane, A. D. ..	2,073		
Informal ..	105		
	9,233	11,595	17,239
Nelson—			
Atmore, H. ..	3,412		
Field, T. A. H. ..	2,902		
Price, J. G. ..	1,079		
Informal ..	83		
	7,476	8,701	15,759
Motueka—			
Hudson, R. P. ..	2,456		
Power, W. P. ..	1,795		
Lomax, P. B. ..	1,255		
Informal ..	46		
	5,552	7,350	13,630
Buller—			
Holland, H. E. ..	3,545		
O'Brien, D. Q. ..	2,542		
Informal ..	56		
	6,143	7,298	14,528
Westland—			
Seddon, T. E. Y...	4,201		
O'Brien, J. ..	2,704		
Informal ..	85		
	6,990	8,311	15,321
Wairau—			
McCallum, R. ..	2,152		
Cooke, B. J. ..	1,656		
Corry, J. J. ..	1,430		
Penny, E. H. ..	1,348		
Informal ..	35		
	6,921	7,919	14,352
Hurunui—			
Forbes, G. W. ..	3,008		
Armstrong, J. G.	2,341		
Gardner, G. G. ..	373		
Informal ..	50		
	5,772	7,147	13,173

Electoral Districts and Names of Candidates.	Number of Votes recorded.	Number of Electors on Roll.	Population at Census, 1916.
Kaiapoi—			
Jones, D. ..	2,580		
Buddo, D. ..	2,530		
Williams, C. M. ..	1,521		
Informal ..	71		
	6,702	7,998	14,038
Christchurch North—			
Isitt, L. M. ..	6,033		
Armstrong, H. T.	3,600		
Informal ..	313		
	9,946	12,104	17,132
Christchurch East—			
Thacker, H. T. J.	5,572		
Hunter, H. ..	3,632		
Informal ..	216		
	9,420	11,666	17,122
Christchurch South—			
Howard, E. J. ..	5,088		
Holland, H. ..	3,413		
Informal ..	213		
	8,714	11,595	17,114
Riccarton—			
Witty, G. ..	2,948		
Devereaux, W. R.	2,322		
Robertson, J. ..	1,966		
Informal ..	89		
	7,325	8,621	15,771
Avon—			
Sullivan, D. G. ..	5,168		
Russell, G. W. ..	3,520		
Carl, J. L. ..	218		
Informal ..	205		
	9,111	11,137	17,176
Lyttelton—			
McCombs, J. ..	2,999		
MacCartney, R. ..	2,422		
Lester, W. T. ..	1,277		
Ell, H. G. ..	585		
Informal ..	147		
	7,430	8,908	15,957
Ellesmere—			
Rhodes, R. H. ..	3,582		
Barclay, G. ..	2,833		
Informal ..	74		
	6,489	8,577	13,913
Ashburton—			
Nosworthy, W. ..	4,056		
Dickie, W. J. ..	2,563		
Jones, H. M. ..	290		
Informal ..	42		
	6,951	8,119	14,282
Timaru—			
Craigie, J. ..	4,717		
Vinnell, P. C. ..	3,198		
Informal ..	163		
	8,078	10,243	16,258
Temuka—			
Burnett, T. G. ..	3,294		
Talbot, C. J. ..	3,263		
Informal ..	53		
	6,610	8,142	13,638
Waitaki—			
Pitchener, J. ..	2,550		
Anstey, J. ..	2,078		
Paul, W. G. ..	1,665		
Informal ..	55		
	6,348	7,595	13,770
Oamaru—			
Lee, E. P. ..	3,819		
MacPherson, J. A.	3,543		
Informal ..	53		
	7,415	8,553	14,967
Dunedin North—			
Kellett, E. ..	4,784		
Walker, A. ..	3,978		
Informal ..	119		
	8,881	11,199	17,252
Dunedin West—			
Stewart, W. D. ..	5,712		
Brown, J. A. ..	3,291		
Informal ..	122		
	9,125	12,233	17,035
Dunedin Central—			
Statham, C. E. ..	4,769		
Munro, J. W. ..	4,272		
Informal ..	90		
	9,131	11,736	17,136
Dunedin South—			
Sidey, T. K. ..	4,395		
Paul, T. ..	4,311		
Informal ..	123		
	8,829	10,333	16,944
Chalmers—			
Dickson, J. Mc. ..	2,693		
Gilchrist, J. ..	1,810		
Colquhoun, D. ..	1,382		
Informal ..	70		
	5,955	7,248	14,400

Electoral Districts and Names of Candidates	Number of Votes recorded.	Number of Electors on Roll.	Population at Census, 1916.
Bruce—			
Allen, J. ..	2,093		
Edie, J. ..	2,867		
Informal ..	71		
	5,931	7,395	13,224
Clutha—			
Malcolm, A. S. ..	2,257		
Rodger, R. A. ..	2,123		
Maslin, W. S. ..	1,190		
Christie, J. ..	143		
Informal ..	49		
	5,762	6,869	12,949
Wakatipu—			
Horn, J. ..	3,062		
Scott, R. ..	2,261		
Ashworth, A. ..	879		
Informal ..	47		
	6,249	8,010	13,563
Mataura—			
Anderson, G. J. ..	3,042		
McDougall, D. ..	1,766		
McLachlan, A. ..	848		
McIntyre, N. ..	181		
Informal ..	50		
	5,887	7,123	13,706
Wallace—			
Hamilton, A. ..	2,843		
Thomson, J. C. ..	2,800		
Informal ..	58		
	5,701	6,891	13,535
Invercargill—			
Hanan, J. A. ..	4,758		
Archer, J. K. ..	3,355		
Informal ..	93		
	8,206	10,414	16,995
Awarua—			
Hamilton, J. R. ..	3,164		
Ward, J. G. ..	2,407		
Informal ..	80		
	5,651	6,937	13,280

MAORI REPRESENTATIVES.

The Maori population at the census of October, 1916, amounted to 49,776 persons. With four representatives in Parliament, their ratio of representation is one to every 12,444 persons, compared with one to every 14,466 persons for European electorates at the same date, excluding absent soldiers, &c. Polling in each district was as under:—

Electoral Districts and Names of Candidates.	Number of Votes recorded.	Electoral Districts and Names of Candidates.	Number of Votes recorded.
Northern Maori—		*Eastern Maori*—	
Tau Henare	2,665	Apirana Turupu Ngata	*
Nau Paraone Kawiti ..	1,036	*Western Maori*—	
Anaru Ngawaka ..	135	Maui Pomare	2,669
Aperahana Reupene Tuoro	71	Ngarangi Katitia ..	1,245
Wiri Henare	32	Tanea Kaawe Short ..	567
Informal	44	Tuwhakaririka Patena ..	536
		Henare Kaihau ..	215
Total	3,983	Taiwiwi Tukimana te Taniwha	212
Southern Maori—		Tema Pouwharetapu Keawene	45
John Hopere Wharewiti Uru	376	Keritoke te Ahu ..	44
Riki te Mairaki Taiaroa	169	Otene Paora	35
Teone Matapura Erihana	97	Eruera Pohipi Chase ..	24
Hoani Matiu	46	Kipi te Whatanui ..	12
Informal	..	Informal	71
Total	688	Total	5,675

* Elected unopposed.

By-elections.

Since the general election, by-elections have been held in three electorates —viz., Bruce (14th April, 1920), Stratford (6th May, 1920), and Bay of Plenty (30th September, 1920). The first was necessitated by the resignation of Sir James Allen, K.C.B., the second by the invalidation of the previous election owing to irregularities, and the third by the death of the Hon. W. D. S. Macdonald. The results were—

Bruce—		*Stratford*—		*Bay of Plenty*—	
Edie, J. ..	2,421	Masters, R. ..	3,394	Williams, K. S.	2,341
Begg, J. C. ..	2,297	Hine, J. B. ..	3,246	Lysnar, F. ..	1,735
Informal ..	16	Informal ..	24	Informal ..	5
Total ..	4,734	Total ..	6,664	Total ..	4,081
(Number on roll, 7,406.)		(Number on roll, 7,640.)		(Number on roll, 5,765.)	

SECTION VIII.—LICENSES, LOCAL OPTION, ETC.

Licenses and Licensed Houses.

During the year ended the 31st March, 1919, 1,667 licenses for the sale of intoxicating liquors were granted. Of these, 1,156 were publicans' and accommodation licenses, 42 New Zealand wine, 52 packet, 136 wholesale, and 281 conditional licenses. The fees paid amounted to £39,817, and formed part of the revenue of the local governing bodies of the districts in which the licenses were issued. Particulars are given in the following table:—

Number of Licenses granted during the Year 1918–19, and the Amount of Fees paid to Local Bodies therefor.

Licenses.	In Counties.	In Boroughs.	In Town Districts.	Total.
Publicans' licenses	333	594	41	968
Accommodation licenses	174	12	2	188
Total licensed houses ..	507	606	43	1,156
New Zealand wine licenses ..	30	12	..	42
Packet licenses	11	41	..	52
Wholesale licenses	3	131	2	136
Conditional licenses	158	122	1	281
Total licenses granted ..	709	912	46	1,667
Amount of license fees paid to local bodies	£10,665	£27,452	£1,700	£39,817

The number of publicans' and accommodation licenses granted in counties, boroughs, and independent town districts during each of the past ten years is here given, together with the total amount of fees paid for all licenses for the sale of intoxicating liquor:—

Year ended 31st March.	Counties.	Boroughs.	Town Districts.	Total.	Total Fees, All Licenses.
					£
1910	643	580	34	1,257	44,900
1911	630	582	36	1,248	43,843
1912	617	590	28	1,235	42,572
1913	594	592	32	1,218	42,456
1914	578	598	42	1,218	42,283
1915	564	596	47	1,207	41,769
1916	557	598	44	1,199	42,978
1917	536	598	49	1,183	46,164
1918	540	598	46	1,184	41,208
1919	507	606	43	1,156	39,817

The average number of persons to each licensed house in counties, boroughs, and independent town districts respectively for 1918–19 is next shown:—

	Number of Licensed Houses.*	Mean Population, 1918-19, excluding Maoris.	Number of Persons to each Licensed House.
Counties	507	494,304	975
Boroughs	606	591,478	976
Town districts	43	28,924	673
Totals	1,156	1,114,706	964

* *I.e.*, houses holding publicans' or accommodation licenses.

That the proportion of licensed houses to population has declined steadily in the last decade is evidenced by the following figures:—

Year ended 31st March.	Average Persons to a Licensed House.	Year ended 31st March.	Average Persons to a Licensed House.
1910	732	1915	911
1911	803	1916	920
1912	824	1917	918
1913	852	1918	946
1914	895	1919	964

The annual fees payable for licenses are,—

	£
(1.) For a publican's license—	
(*a.*) Within the limits of a borough or town district ..	40
(*b.*) Outside the aforesaid limits	25
(2.) For a New Zealand wine license	1
(3.) For an accommodation license, a sum to be determined by the Licensing Committee, not exceeding	20
(4.) For a packet license—	
(*a.*) For a vessel exceeding 50 tons register	10
(*b.*) For a vessel not exceeding 50 tons register	5
(5.) For a wholesale license	20
(6.) For a conditional license, according to duration of license, a sum not exceeding	30

The approximate capital value of the licensed houses in the counties for the year ended 31st March, 1919, was stated at £690,491, in certain of the boroughs at £1,687,443, and in the town districts at £127,721. There was, besides, an annual value of £122,210 for other licensed houses in the boroughs, which, capitalized at 6 per cent., would represent £2,036,833. The capital value of all licensed houses may therefore be put down at approximately £4,542,488. Caution should be exercised in this connection, as some of the valuations on which the above total is based are by no means recent, revaluations having been delayed by the war. It is probable that the capital value was at the 31st March, 1919, somewhat above the figure quoted.

Special Licensing Poll, 1919.

The results of the special licensing poll of the 10th April, 1919, held under the authority of the Licensing Amendment Act, 1918, were as follows:—

	Votes.
For national continuance	264,189
For national prohibition with compensation ..	253,827

Licensing Poll, 1919.

Under the provisions of the Licensing Amendment Act, 1918, three issues were submitted on the 17th December, 1919. The final figures are—

	Votes.
For national continuance	241,251
For State purchase and control	32,261
For national prohibition	270,250

None of the three issues secured the minimum of more than half of the total valid votes cast. Voting in each licensing district was as under:—

District.	For National Continuance.	For State Purchase and Control.	For National Prohibition.	District.	For National Continuance.	For State Purchase and Control.	For National Prohibition.
Bay of Islands ..	2,205	300	2,631	Nelson	3,199	694	3,480
Marsden	2,130	316	3,476	Motueka	2,771	499	2,210
Kaipara	2,262	332	2,708	Buller	2,815	393	2,812
Waitemata ..	3,224	426	4,720	Westland ..	3,901	490	2,468
Eden	2,465	306	3,720	Wairau	3,451	288	3,110
Auckland ..	13,410	1,161	11,629	Hurunui	2,961	321	2,439
Grey Lynn ..	3,350	325	4,835	Kaiapoi	3,060	269	3,275
Roskill	2,633	379	6,214	Christchurch ..	12,152	1,747	13,752
Parnell	3,324	458	5,221	Riccarton ..	3,121	411	3,704
Manukau	3,046	339	4,198	Avon	3,676	555	4,790
Franklin	2,296	326	3,395	Lyttelton ..	3,078	486	3,770
Raglan	2,331	487	2,719	Ellesmere ..	3,258	302	2,818
Thames	2,356	336	2,971	Ashburton ..	3,396	372	3,023
Ohinemuri ..	2,263	757	2,651	Timaru	3,343	355	4,241
Tauranga ..	2,619	483	3,120	Temuka	3,090	403	3,032
Waikato	2,886	362	4,375	Waitaki	2,881	250	3,123
Rotorua	2,945	541	3,081	Oamaru	3,036	354	3,806
Bay of Plenty ..	2,914	485	2,489	Dunedin	11,377	916	14,430
Waitomo ..	2,933	491	2,372	Dunedin South ..	3,646	293	4,759
Gisborne ..	3,459	724	3,840	Chalmers ..	2,399	146	3,294
Hawke's Bay ..	3,581	542	3,532	Bruce	2,619	291	2,894
Napier	3,645	644	3,733	Clutha	2,367	222	3,073
Waipawa	3,025	471	3,099	Wakatipu ..	3,285	304	2,577
Pahiatua ..	2,984	288	3,223	Mataura	2,289	331	3,097
Masterton ..	3,097	471	3,375	Wallace	2,740	248	2,596
Wairarapa ..	3,035	341	2,842	Invercargill ..	2,986	674	4,319
Stratford ..	2,348	207	3,574	Awarua	2,416	255	2 876
Taranaki ..	2,780	320	4,407				
Egmont	2,638	214	3,133	Totals ..	240,364	31,682	269.972
Patea	2,967	234	3,776				
Wanganui ..	3,739	325	4,167				
Waimarino ..	3,339	479	1,771	*Number of Valid Votes recorded by Members of Expeditionary Force.*			
Oroua	2,577	248	3,229				
Rangitikei ..	3,109	385	3,345				
Manawatu ..	2,364	266	2,539	England	148	230	35
Palmerston ..	3,584	352	4,376	Samoa	34	18	16
Otaki	2,360	418	2,300	On board troopships	705	331	227
Hutt	3,842	574	3,717				
Wellington ..	13,702	2,240	11,295	Totals ..	887	579	278
Wellington South ..	3,633	583	3,851				
Wellington Suburbs	3,651	877	4,555	Grand totals ..	241,251	32,261	270,250

Local Option.

In the thirteen no-license districts an additional issue was submitted—viz., local restoration. Local prohibition was maintained in all districts.

No-License Districts.

District.	Number of Electors on Effective Roll.	License to be restored.	License be not restored.	Number of Valid Votes recorded.	Result.
Eden	7,888	2,440	3,864	6,304	Restoration not carried.
Grey Lynn ..	10,130	3,244	5,067	8,311	"
Roskill	10,996	2,525	6,330	8,855	"
Ohinemuri ..	7,431	3,058	2,559	5,617	"
Masterton ..	8,238	3,261	3,610	6,871	"
Wellington South ..	10,122	3,812	4,100	7,912	"
Wellington Suburbs	11,595	3,747	5,062	8,809	"
Ashburton ..	8,119	3,646	3,157	6,803	"
Oamaru	8,553	3,181	3,989	7,170	"
Bruce	7,395	2,576	3,170	5,746	"
Clutha	6,869	2,387	3,191	5,578	"
Mataura	7,123	2,456	3,149	5,605	"
Invercargill ..	10,414	3,565	4,409	7,974	"
Totals ..	114,873	39,898	51,657	91,555	

SECTION IX.—LOCAL GOVERNING BODIES.

On the 31st March, 1919, the boroughs numbered 118 and the counties 126. There were, moreover, 94 road districts (including two without Boards) in existence at the close of March, 1919, and 36 independent and 31 non-independent town districts. Besides the above there were 42 river-protective districts, 3 city and suburban drainage districts (Christchurch, Dunedin, and Auckland), 7 water-supply districts, 55 land-drainage districts under the Land Drainage Act, 2 tramway districts, and 1 local railway district. The Harbour Boards numbered 36, excluding 10 cases where some other local authority acts as Harbour Board.

Receipts.

Local governing bodies levied rates in the financial year 1918-19 to the amount of £2,939,606, of which £2,028,151 consisted of general rates and £911,455 special and separate rates. The sum of £87.125 was raised by licenses, and £112,241 by other taxes, making £3,138,972 altogether, which sum is equivalent to £2 16s. 11d. per head of the mean European population. In the year 1917–18 the local taxation was £2 12s. per head, or 4s. 11d. less than in 1918–19.

The receipts of local governing bodies, divided into the various groups shown above, are given for each of the past ten years.

Financial Year.	Revenue from				Receipts not Revenue.	Total Receipts.
	Rates.	Licenses, Fees, Rents, and other Sources.	Government.	Total Revenue.		
	£	£	£	£	£	£
1914–15 ..	2,140,086	2,622,221	239,076	5,001,383	2,595,706	7,597,089
1915–16 ..	2,355,155	2,705,562	262,083	5,322,800	2,469,275	7,792,075
1916–17 ..	2,534,539	3,001,324	242,618	5,778,481	1,411,422	7,189,903
1917–18 ..	2,674,541	3,034,894	248,855	5,958,290	1,250,047	7,208,337
1918–19 ..	2,939,606	3,184,741	267,330	6,391,677	942,780	7,334 457

The figures given in this and following tables are for the year ended 31st March, except in the case of certain Harbour Boards whose own financial year is taken in each case. A summary of receipts for the year 1918–19 is given below.

The total revenue of the local bodies for the financial year was £6,391,677, and they further received a sum of £942,780 which could not properly be termed "revenue," making altogether a grand total of receipts amounting to £7,334,457. The rates formed 45·99 per cent. of the revenue proper; licenses, rents, and other sources yielded 49·83 per cent.; and 4·18 per cent. was granted by the General Government.

LOCAL GOVERNING BODIES.—RECEIPTS, 1918–19.

Local Districts.	Revenue from				Receipts not Revenue.	Total Receipts
	Rates.	Licenses, Rents, &c.	Government.	County.		
	£	£	£	£	£	£
Counties	1,175,752	121,836	192,735	...	344,241	1,834,564
Boroughs	1,346,634	1,979,880	44,529	...	401,178	3,772,221
Town districts	55,056	32,780	4,075	178	17,195	109,284
Road districts	94,956	12,458	14,205	1,642	24,427	147,688
River districts	17,174	12,941	13	...	4,073	34,201
Land-drainage districts	28,272	1,800	...	...	28,758	58,830
Water-supply districts ...	726	2,655	1	...	288	3,670
Tramway districts ...	3,023	173,210	...	...	...	176,233
City and suburban drainage districts	100,181	3,243	825	...	16,606	120,855
Railway district ...	...	8,732	...	...	228	8,960
Harbour districts ...	117,832	883,386	10,947	...	105,786	1,067,951
Totals	2,939,606	3,182,921	267,330	1,820	942,780	7,334,457

RATES.

As stated above, rates contributed in 1918–19 the sum of £2,939,606 to the revenue of local governing bodies. General rates levied brought in £2,028,151, and special and separate rates £911,455. Of the latter, £709,166 was received by boroughs, and £150,655 by counties. The whole of the rates in harbour districts were general rates, while all those collected by Tramway Boards came under the heading of "special and separate."

RATES LEVIED BY LOCAL GOVERNING BODIES.

Financial Year.	General.	Special and Separate.	Total.
	£	£	£
1914–15	1,484,591	655,495	2,140,086
1915–16	1,607,764	747,391	2,355,155
1916–17	1,695,572	838,967	2,534,539
1917–18	1,791,028	883,513	2,674,541
1918–19	2,028,151	911,455	2,939,606

Separate rates are of two classes—"general" and "particular." General separate rates are levied for the construction, maintenance, &c., of any public work, for the acquisition of land or buildings, or for engaging in any undertaking for the benefit of whole or part of a local district. Particular separate rates are levied in respect of water-supply, lighting, sanitation, and of libraries. Special rates are those levied as security for the repayment of loans.

At the 31st March, 1919, the system of rating on the unimproved value was in force in 36 counties, 61 boroughs, 26 town districts, 14 road districts, 14 river-protective districts, 15 land-drainage districts, and 1 tramway district.

Receipts from General Government.

The following list shows the various items of revenue received from the Government together with the amount for the financial year 1918–19 in each case: Rates on Crown and Native lands, £1,914; timber and flax, royalties £5,100; goldfields revenue and gold duty, £25,822; subsidy on rates, £168,835; one-third of receipts from lands sold on deferred payment and from perpetual leases, £35,094; one-fourth of rents from small grazing-runs, £7,722; fees and fines, £4,564; other receipts (including amounts paid to Harbour Boards by the Admiralty), £18,279. In addition there are special grants from the General Government for various local works of a public or semi-public character, £156,354. These are not considered revenue, and are included with "Receipts not revenue." A further class of receipts from the Government is provided by loans, £208,158.

Payments.

Payments of local governing bodies for ten years are as follows:—

Financial Year.	Payments.	Financial Year.	Payments.
	£		£
1909–10 ..	4,898,482	1914–15 ..	6,806,567
1910–11 ..	5,360,261	1915–16 ..	6,920,736
1911–12 ..	6,074,372	1916–17 ..	6,758,593
1912–13 ..	6,537,769	1917–18 ..	7,103,073
1913–14 ..	6,796,314	1918–19 ..	7,320,277

Payments during 1918–19 are shown below in more detail:—

Local Governing Bodies.—Payments, 1918–19.

—	Public Works.	Hospitals and Charitable Aid.	Administration.	Interest on Loans and Overdraft.	Other.	Total Payments.
	£	£	£	£	£	£
Counties	1,217,405	178,583	158,135	140,538	68,074	1,762,735
Boroughs ..	2,648,344	117,871	175,095	697,484	176,041	3,814,835
Town districts ..	70,894	3,484	13,515	19,523	4,410	111,826
Road districts ..	98,981	8,484	15,023	12,139	9,435	144,062
River districts ..	13,986	..	6,074	5,608	5,995	31,663
Land-drainage districts	42,680	..	4,746	9,928	3,419	60,773
Water-supply districts	2,732	..	753	9	215	3,709
Tramway districts	142,315*	..	†	28,944	420	171,679
City and suburban drainage districts	28,295	..	7,799	65,939	6,031	108,064
Railway district ..	13,283	..	..	1,226	1,000	15,509
Harbour districts ..	578,393	..	125,977	323,921	67,131	1,095,422
Totals ..	4,857,308	308,422	507,117	1,305,259	342,171	7,320,277

* Including expenses of management. † Included in public works.

It is seen that during the year the total payments were £7,320,277, of which £4,857,308 was expended on public works and £1,305,259 on debt charges. The item "administration expenses" does not rank very high in the aggregate, though the table following shows that in some classes of local bodies the expenses of administration account for a fair percentage of the revenue :—

Local Districts.	Administration Expenses as Percentage of		
	Revenue.	Total Receipts.	Payments.
	£	£	£
Counties	10·61	8·62	8·97
Boroughs	5·19	4·64	4·59
Town districts	14·68	12·73	12·09
Road districts	12·19	10·17	10·43
River districts	20·16	17·76	19·18
Land-drainage districts	15·78	8·07	7·81
Water-supply districts	22·27	20·52	20·30
City and suburban drainage districts	7·48	6·45	7·23
Harbour districts	13·09	11·80	11·50
All districts	8·17	7·09	7·11

The table following gives, in respect of boroughs only, the payments out of loan-money during the past five years, classified under various heads :—

EXPENDITURE OUT OF LOANS.—BOROUGHS ONLY.

Year ended 31st March.	Streets, Footways, and Bridges.	Drainage and Sanitation.	Waterworks.	Tramways.	Abattoirs, Slaughterhouses and Pounds.	Lighting and Power Services.	Other Public Works.	Management, Interest, and Sundries.	Total.
	£	£	£	£	£	£	£	£	£
1915 ..	153,209	68,061	70,306	28,889	5,463	201,651	58,982	25,098	611,659
1916 ..	175,248	98,366	86,864	45,390	3,860	235,071	78,398	17,818	741,015
1917 ..	98,595	92,677	84,012	21,497	14,970	130,489	60,902	16,794	519,936
1918 ..	72,290	86,346	45,917	6,880	..	104,359	57,086	12,571	385,449
1919 ..	92,923	62,710	40,593	..	671	68,276	34,014	5,163	304,350

ASSETS AND LIABILITIES.

The assets and liabilities of local governing bodies at the end of the financial year 1918–19 are as shown in the table following. The figures shown in the column "other assets" are taken from the respective balance-sheets, but are far from complete. In quite a number of cases no assets

whatever are shown, while in the majority of the others nothing is included for the reserves held. These totals can be taken only as a very approximate indication of the property held in addition to the actual cash assets.

	Assets.		Liabilities.			
	Cash Assets.	Other Assets (as estimated in Published Balance-sheets).	Net Indebtedness on Loans (excluding Government Loans and those from the State Advances Office).	Net Indebtedness on Loans from State Advances Office. (Net indebtedness on 31st March, 1919.)	Inscribed Debt, *i.e.*, Loans from Treasury under Loans to Local Bodies Acts). Estimated Present Indebtedness.	Liabilities other than the Loans included in preceding Columns (Bank Overdrafts, Outstanding Accounts, &c.).
	£	£	£	£	£	£
Counties ..	607,596	620,217	498,145	1,116,204	822,974	507,029
Boroughs ...	1,090,487	14,709,971	10,961,957	1,313,700	563,442	945,540
Town districts	32,768	228,130	251,599	83,407	10,118	50,035
Road districts	54,956	95,843	73,140	88,129	53,897	24,491
River districts	12,938	90,273	34,273	3,213	40,185	15,440
Land-drainage districts	26,813	21,231	25,457	125,665	61,170	6,835
City and suburban drainage districts	52,282	585,886	1,223,325	174	..	491,493
Tramway districts	25,624	708,306	565,557	..	..	161,383
Water-supply districts	1,327	1,896	20,796	..	637	234
Railway districts	341	29,278	..	..	..	29,619
Harbour districts	858,690	8,751,454	6,246,616	116,345	..	240,141
Totals ..	2,763,822	25,842,485	19,900,865	2,846,837	1,552,423	2,472,240

Loans of Local Bodies.

The net indebtedness of local governing bodies on account of outstanding loans increased in the twenty years 1899–1900 to 1918–19 from £6,356,630 to £19,922,153, exclusive of moneys borrowed from the Government, which represented a further indebtedness of £4,399,260 at the end of March, 1919, made up as follows: Inscribed debt, *i.e.*, debentures under the Roads and Bridges Construction Act, 1882, converted, and amounts borrowed from the Treasury under the Local Bodies' Loans Acts, £1,552,423; loans from the New Zealand State Advances Office, £2,846,837.

The gross indebtedness of local bodies at 31st March, 1919, amounted to £28,323,853, made up as follows: Debentures and stock, &c., £22,673,712; inscribed debt, £2,554,401; loans for State Advances Office, £3,095,740.

A table is given showing the gross amount of the debt raised in New Zealand and elsewhere, other than loans from the General Government. Columns are added showing the interest payable and the average rate of

interest per cent. During the war period there have been decreases in the amounts raised abroad and increases in the amounts raised in New Zealand, making a difference between the two amounts of nearly £7,000,000 at the 31st March, 1919.

INDEBTEDNESS AND INTEREST CHARGES.

Financial Year.	Raised in New Zealand.	Raised Abroad.	Total Indebtedness.	Interest.	Average Rate per Cent.
	£	£	£	£	£
1914–15	10,998,775	8,455,700	19,454,475	870,992	4·48
1915–16	12,793,543	7,960,625	20,754,168	948,511	4·57
1916–17	13,218,617	8,214,150	21,432,767	983,408	4·59
1917–18	14,096,187	8,164,350	22,260,537	1,034,272	4·64
1918–19	14,749,763	7,923,949	22,673,712	1,048,999	4·63

The average rate of interest had shown a continuous fall for many years prior to the war. Since 1914–15, however, a tendency to an increasing rate of interest has developed. Of a gross indebtedness of £22,673,712, £5,445,923 was held at 4 per cent.; £2,015,913 at 4¼ per cent.; £6,310,500 at 4½ per cent.; £5,377,150 at 5 per cent.; £1,359,278 at 5¼ per cent., and £1,082,190 at 6 per cent. Against this were sinking funds amounting to £2,751,559, leaving the net indebtedness, other than to the State, £19,922,153. The annual charge for interest was £1,048,999, and for sinking fund £182,465. The net indebtedness to the State Advances Office was £2,846,837, representing loans originally amounting to £3,095,740. The instalments of principal and interest on this amounted to an annual charge of £161,401. The estimated net indebtedness on account of Inscribed Debt was £1,552,423 at the 1st February, 1919. This debt is decreasing yearly, and will be extinguished in course of time. The amount outstanding is repayable by annual instalments of £97,025.

Detailed tables showing the statistics of individual local bodies will be found in Volume iv of "Statistics of New Zealand," also as regards boroughs, town districts, and Harbour Boards in the "Municipal Handbook," published biennially.

SECTION X.—VALUATION OF LAND.

GENERAL valuations of land for the whole of New Zealand were made periodically up to the year 1897–98. Since that year no general valuations for the whole Dominion have been made, but portions have been revalued from time to time.

No statement absolutely accurate at the present day can be given, as the totals for 1919 and preceding years are not ascertained by general revaluations in each year. Revaluations are made, district by district, as circumstances permit. The total capital value, £445,533,445 at 31st March, 1919, represents a figure treble that of twenty years previous.

A quinquennial summary of valuation in the North and South Islands follows:—

CAPITAL AND UNIMPROVED VALUES IN THE NORTH AND SOUTH ISLANDS AND FOR THE WHOLE DOMINION.

Year.	North Island.		South Island.*		New Zealand.	
	Capital Value (Land and Improvements).	Unimproved Value of Land (included in previous Column).	Capital Value (Land and Improvements).	Unimproved Value of Land (included in previous Column).	Capital Value (Land and Improvements).	Unimproved Value of Land (included in previous Column).
			COUNTIES.			
	£	£	£	£	£	£
1915	137,669,168	91,079,543	94,296,275	69,841,015	231,965,443	160,920,558
1916	146,242,118	97,379,015	96,811,084	71,199,250	243,053,202	168,578,265
1917	154,477,641	102,981,689	100,636,688	74,108,106	255,114,329	177,089,795
1918	164,928,221	109,611,569	103,714,879	76,670,835	268,643,100	186,282,404
1919	182,705,967	120,687,776	108,086,615	80,086,519	290,792,582	200,774,295
			BOROUGHS.			
1915	87,671,609	48,150,309	46,638,663	19,396,948	134,310,272	67,547,257
1916	92,902,160	50,443,309	48,313,999	20,050,324	141,216,159	70,493,733
1917	96,207,345	51,510,819	48,770,852	20,018,500	144,978,197	71,529,319
1918	97,648,139	51,772,269	49,660,419	20,358,456	147,308,558	72,130,725
1919	98,520,644	51,910,886	50,615,526	20,737,636	149,136,170	72,648,522
			TOWN DISTRICTS.			
1915	3,916,101	1,854,576	884,867	382,756	4,800,968	2,237,332
1916	4,273,975	1,989,761	621,393	260,496	4,895,368	2,250,257
1917	4,732,948	2,207,633	640,597	260,961	5,373,545	2,468,594
1918	4,820,083	2,255,646	611,632	253,037	5,431,715	2,508,683
1919	4,941,519	2,301,302	663,174	264,290	5,604,693	2,565,592
			GRAND TOTALS.			
1915	229,256,878	141,084,428	141,819,805	89,620,719	371,076,683	230,705,147
1916	243,418,253	149,812,085	145,746,476	91,510,170	389,164,729	241,322,255
1917	255,417,934	156,700,141	150,048,137	94,387,567	405,466,071	251,087,708
1918	267,396,443	163,639,484	153,986,930	97,282,328	421,383,373	260,921,812
1919	286,168,130	174,899,964	159,365,315	101,088,445	445,533,445	275,988,409

* Including Stewart Island and Chatham Islands.

The total valuations are also given for individual counties, boroughs, and independent town districts. In making comparisons it should be borne in mind, as previously remarked, that the valuations are not all for the same year.

COUNTIES.

TABLE SHOWING CAPITAL AND UNIMPROVED VALUE OF EACH COUNTY IN NEW ZEALAND.

County.	Gross Values.	
	Capital Value (Land and Improvements).	Unimproved Value of Land (included in previous Column).
	£	£
Mongonui	931,868	551,484
Whangaroa ..	294,696	188,519
Bay of Islands ..	1,601,130	1,020,544
Hokianga ..	1,269,515	772,222
Whangarei ..	2,500,883	1,413,326
Hobson	2,111,900	1,258,372
Otamatea	1,713,799	952,032
Rodney	1,024,641	615,121
Waitemata ..	2,041,388	1,819,282
Eden	4,245,928	2,640,715
Manukau	3,079,652	2,101,565
Franklin	3,891,084	2,561,224
Great Barrier ..	133,758	108,440
Islands—		
Little Barrier, Waiheke, &c.	327,038	212,080
Waikato	4,664,736	3,323,252
Raglan	3,275,713	2,118,572
Waipa	4,982,742	3,441,515
Kawhia	575,503	369,734
Awakino	954,555	553,533
Waitomo	4,071,034	2,615,184
Ohura	1,029,903	657,823
Coromandel ..	432,953	281,627
Thames	1,806,296	1,287,286
Ohinemuri ..	1,868,027	1,363,882
Tauranga ..	1,764,584	1,046,348
Piako	3,316,433	2,256,843
Matamata ..	3,095,205	1,946,197
Rotorua	618,760	482,173
Whakatane ..	2,188,628	1,505,362
Opotiki	1,330,598	857,802
East Taupo ..	544,775	347,029
West Taupo ..	1,976,991	1,433,929
Islands—		
Mayor and Motiti	19,415	12,141
Waiapu	4,766,053	2,622,928
Uawa	1,549,464	1,042,086
Waikohu	5,077,035	3,096,254
Cook	6,522,824	4,419,190
Wairoa	3,836,490	2,457,547
Hawke's Bay ..	10,947,629	8,234,152
Waipawa	2,955,150	2,096,670
Waipukurau ..	908,285	678,599
Dannevirke ..	3,315,936	2,179,650
Woodville ..	1,381,106	962,641
Patangata ..	4,600,982	3,581,022
Weber	719,621	475,510
Clifton	998,933	565,261
Taranaki	2,263,310	1,266,804
Egmont	1,933,925	1,033,292
Stratford	2,083,836	1,218,425
Whangamomona ..	564,030	325,790
Waimate West ..	1,413,041	1,117,710
Hawera	4,293,151	3,116,491
Eltham	1,998,741	1,356,856
Patea	3,612,307	2,391,618
Waitotara ..	2,677,626	1,824,996
Waimarino ..	1,404,310	971,926
Wanganui ..	2,209,754	1,372,092
Rangitikei ..	7,122,856	4,677,926
Kiwitea	3,415,433	2,232,152
Pohangina ..	1,793,209	1,154,131
Kaitieke	1,478,081	969,492
Manawatu ..	3,644,282	2,598,633
Oroua	2,941,855	2,101,250
Kairanga	2,986,631	2,189,130
Horowhenua ..	3,484,090	2,512,473

County.	Gross Values.	
	Capital Value (Land and Improvements).	Unimproved Value of Land (included in previous Column).
	£	£
Islands—		
Kapiti, Mana, and Somes	17,984	13,378
Chatham Islands ..	286,373	195,057
Pahiatua	1,737,710	1,042,597
Akitio	1,187,656	608,945
Castlepoint ..	831,608	536,660
Eketahuna ..	1,854,220	1,011,040
Mauriceville ..	541,815	393,988
Masterton ..	2,854,883	1,876,765
Wairarapa South ..	2,280,446	1,358,000
Featherston ..	4,674,260	2,987,593
Hutt	2,208,449	1,286,806
Makara	1,047,166	499,590
Collingwood ..	474,153	310,603
Takaka	697,979	391,875
Waimea	3,186,014	1,784,761
Sounds	793,741	478,729
Marlborough ..	3,160,853	2,391,442
Awatere	2,241,612	1,760,017
Kaikoura	1,228,734	903,231
Buller	1,413,917	731,070
Murchison ..	780,201	473,313
Inangahua ..	589,482	296,775
Grey	1,003,363	656,554
Westland	1,052,424	702,567
Cheviot	1,792,145	1,469,113
Amuri	2,611,891	2,125,925
Waipara	3,166,649	2,701,129
Ashley	850,497	700,790
Kowai	1,189,261	937,277
Oxford	1,149,665	952,064
Rangiora	1,383,154	1,065,278
Eyre	1,203,409	961,226
Waimairi	3,722,335	2,279,417
Paparua	2,114,827	1,567,503
Malvern	1,953,055	1,539,577
Tawera	580,069	483,579
Heathcote ..	959,585	551,690
Halswell	855,994	684,184
Selwyn	1,727,462	1,306,862
Springs	1,264,600	1,039,935
Ellesmere	2,230,884	1,818,306
Mount Herbert ..	572,004	470,054
Wairewa	1,281,873	1,059,078
Akaroa	2,286,366	1,916,312
Ashburton	9,857,939	8,181,911
Geraldine ..	3,524,300	2,871,199
Levels	3,061,792	2,435,063
Mackenzie ..	2,136,238	1,675,281
Waimate	5,398,886	4,396,194
Waitaki	5,362,790	4,116,986
Maniototo ..	927,718	640,772
Waihemo	799,805	598,881
Waikouaiti ..	894,506	511,166
Peninsula	521,579	291,500
Taieri	2,200,729	1,588,629
Tuapeka	2,439,816	1,661,127
Bruce	1,763,770	1,171,332
Clutha	2,765,446	1,745,430
Islands—		
Quarantine and Goat	3,454	900
Vincent	977,040	645,674
Lake	551,693	405,151
Fiord	141,293	137,513
Wallace	3,703,517	2,559,351
Southland ..	11,352,356	7,049,179
Stewart Island ..	160,870	129,164
Islands—		
Antipodes, &c. ..	13,880	13,880

BOROUGHS.

TABLE SHOWING CAPITAL AND UNIMPROVED VALUE OF EACH BOROUGH IN NEW ZEALAND.

Borough.	Gross Values. Capital Value (Land and Improvements).	Gross Values. Unimproved Value of Land (included in previous Column).
	£	£
Whangarei ..	659,444	348,226
Dargaville ..	426,065	231,435
Birkenhead ..	615,185	322,750
Devonport ..	1,562,147	656,205
AUCKLAND CITY—		
City Portion	18,088,551	11,205,565
Parnell ,,	1,266,308	616,925
Grey Lynn ,,	1,321,521	516,066
Arch Hill ,,	223,425	104,980
Eden Terrace ,,	326,934	140,324
Epsom ,,	1,210,069	501,085
Remuera ,,	2,464,139	1,187,414
Total of City ..	24,900,947	14,363,159
Newmarket ..	688,780	367,504
Onehunga ..	1,073,480	510,875
Takapuna ..	1,178,121	768,099
Northcote ..	339,078	185,208
Mount Albert ..	1,686,788	807,170
Mount Eden ..	2,477,450	1,021,085
Otahuhu	506,525	272,540
Pukekohe	393,230	218,996
Hamilton ..	2,279,271	1,369,360
Cambridge ..	449,440	258,761
Te Awamutu ..	303,560	174,281
Thames	443,630	183,510
Tauranga	300,405	143,516
Paeroa	193,276	84,843
Waihi	419,582	147,407
Te Aroha	348,585	160,230
Rotorua (Town) ..	787,555	468,762
Whakatane ..	246,915	135,172
Opotiki	273,382	153,086
Taumarunui ..	386,500	196,977
Te Kuiti	500,357	332,180
Gisborne	2,978,745	1,490,480
Wairoa	431,393	238,803
Napier	3,462,860	1,671,501
Hastings	2,666,045	1,521,015
Dannevirke ..	839,595	381,470
Woodville ..	165,827	60,852
Waipawa ..	261,662	141,425
Waipukurau ..	247,133	133,198
New Plymouth ..	2,255,380	1,333,084
Hawera	880,682	421,003
Patea	149,197	57,406
Waitara	235,632	84,546
Inglewood ..	200,764	87,392
Stratford	578,268	241,718
Eltham	416,993	193,542
Wanganui ..	3,185,107	1,920,790
Marton	349,552	130,557
Ohakune	134,113	47,992
Taihape	349,943	173,742
Feilding	884,534	431,756
Palmerston North ..	3,216,938	1,661,856
Foxton	278,670	115,902
Kaiori	533,042	310,031
WELLINGTON CITY—		
Onslow Portion	959,654	473,242
Karori ,,	582,561	214,909
City ,,	18,121,651	9,714,359
Kilbirnie ,,	3,803,084	1,497,906
Island Bay ,,		
Ohiro ,,		
Total of City ..	23,416,953	11,900,416
Shannon	124,660	54,085
Levin	309,968	148,014
Pahiatua	242,242	101,454
Masterton ..	1,386,887	574,465
Carterton	298,251	118,650
Greytown	205,102	85,957
Lower Hutt ..	1,458,818	830,393
Petone	1,473,418	673,282
Eketahuna ..	154,611	66,624
Featherston ..	137,203	32,525
Eastbourne ..	237,087	102,282
Miramar	878,656	482,341
Richmond ..	221,538	117,475
Nelson City ..	1,827,171	850,023
Picton	295,873	154,235
Blenheim	991,215	477,183
Motueka	202,035	89,676
Westport	743,911	373,562
Greymouth ..	845,301	269,286
Brunner	71,330	12,240
Kumara	33,875	6,135
Hokitika	262,149	77,178
Ross	24,730	7,102
Runanga	58,483	18,859
Rangiora	330,387	130,327
Kaiapoi	100,748	58,753
CHRISTCHURCH CITY—		
St. Albans Portion	2,665,325	925,855
Richmond ,,	214,200	72,025
North-east ,,	662,635	253,216
North-west ,,	1,843,996	869,861
South-east ,,	1,562,636	727,337
South-west ,,	3,657,987	2,113,981
Sydenham ,,	2,079,366	746,938
Opawa ,,	152,230	67,430
St. Martin's ,,	70,335	36,760
Linwood ,,	1,072,196	368,379
Avonside ,,	121,375	52,355
Total of City ..	14,102,281	6,234,137
Woolston	522,416	172,346
New Brighton ..	426,082	170,682
Sumner	598,902	272,465
Lyttelton	988,107	272,707
Akaroa	115,756	44,319
Riccarton	576,644	197,035
Spreydon	627,990	235,360
Ashburton ..	546,036	213,569
Timaru	3,255,225	1,562,170
Geraldine	136,863	43,660
Temuka	251,923	87,021
Waimate	394,075	129,510

TABLE SHOWING CAPITAL AND UNIMPROVED VALUE OF EACH BOROUGH IN NEW ZEALAND—*continued.*

Borough.	Gross Values. Capital Value (Land and Improvements).	Gross Values. Unimproved Value of Land (included in previous Column).	Borough.	Gross Values. Capital Value (Land and Improvements).	Gross Values. Unimproved Value of Land (included in previous Column).
	£	£		£	£
Oamaru	880,933	290,416	St. Kilda	958,755	313,415
Hampden	30,001	9,647	Green Island ..	285,256	65,775
Naseby	20,863	2,583	Mosgiel	267,030	95,660
Palmerston ..	91,519	24,376	Roxburgh ..	37,080	5,969
Waikouaiti ..	77,457	28,112	Lawrence	111,484	29,049
Port Chalmers ..	369,746	120,952	Tapanui	33,225	9,075
West Harbour ..	214,002	73,812	Milton	185,753	55,946
DUNEDIN CITY—			Balclutha	224,718	82,803
Valley Portion	649,416	210,537	Kaitangata ..	110,801	31,538
Maori Hill ,,	457,712	186,770	Cromwell	46,487	10,060
Roslyn ,,	1,050,062	346,496	Alexandra ..	57,454	11,763
Mornington ,,	554,061	191,056	Arrowtown ..	21,519	3,375
Leith ,,	1,609,480	671,655	Queenstown ..	65,595	14,564
Bell ,,	1,818,035	801,415	Gore	705,694	275,654
High ,,	3,026,071	1,308,060	Mataura	206,702	74,828
South ,,	1,088,105	458,135	Winton	114,537	38,765
Caversham ,,	960,187	287,350	Invercargill ..	3,861,203	1,738,124
South Dunedin ,,	662,437	167,203	Invercargill South ..	278,408	136,301
Anderson's Bay ,,	398,831	161,858	Riverton	139,197	44,885
			Bluff	303,169	101,100
Total of City ..	12,274,397	4,790,535			

TOWN DISTRICTS.

TABLE SHOWING CAPITAL AND UNIMPROVED VALUE OF LAND IN EACH TOWN DISTRICT (OUTSIDE THE JURISDICTION OF ANY COUNTY) IN NEW ZEALAND.

Town District, independent of County (outside County Jurisdiction).	Gross Values. Capital Value (Land and Improvements).	Gross Values. Unimpr'v'd Value of Land (included in previous Column).	Town District, independent of County (outside County Jurisdiction).	Gross Values. Capital Value (Land and Improvements).	Gross Values. Unimpr'v'd Value of Land (included in previous Column).
	£	£		£	£
Hikurangi ..	66,180	30,415	Castlecliff	186,386	65,532
Warkworth ..	82,262	26,695	Raetihi	95,373	42,027
Helensville ..	111,740	36,430	Rangataua ..	34,840	10,696
New Lynn ..	199,340	105,085	Mangaweka ..	57,252	22,055
Ellerslie	285,410	135,910	Hunterville ..	96,144	37,325
Waiuku	138,783	67,415	Bull's	57,796	23,798
Papakura	220,945	134,120	Manunui	72,149	25,894
Tuakau	104,422	59,107	Otaki	200,370	111,034
Huntly	151,500	71,820	Martinborough ..	161,155	53,549
Ngaruawahia ..	135,188	64,238	Johnsonville ..	191,373	100,461
Te Puke	104,269	45,650	Upper Hutt ..	247,664	128,900
Morrinsville ..	239,390	125,835	Hampstead ..	145,176	58,165
Matamata ..	133,685	66,635	Tinwald	89,316	45,405
Mangapapa ..	274,987	122,816	Pleasant Point ..	80,477	36,582
Taradale	226,974	134,901	Nightcaps ..	46,518	11,546
Havelock North ..	266,707	136,903	Otautau	128,608	49,969
Mannia	117,426	51,258	Lumsden	49,715	12,043
Waverley	100,717	42,341	Wyndham	123,364	50,580
Gonville	581,092	222,427			

SECTION XI.—COMMERCE.

SUBSECTION A.—TOTAL TRADE.

The Growth of Trade, Period 1853–1919.

The following table shows the increase in the total trade since the year 1853:—

Total Trade, Imports, and Exports of New Zealand, 1853–1919.

Year.	Total Value.			Value per Head (excluding Maoris).								
	Total Trade.	Imports.	Exports.	Total Trade.			Imports.			Exports.		
	£	£	£	£	s.	d.	£	s.	d.	£	s.	d.
1853 ..	901,110	597,828	303,282	30	0	9	19	18	7	10	2	2
1863 ..	10,510,079	7,024,674	3,485,405	72	10	5	48	9	5	24	1	0
1873 ..	12,075,058	6,464,687	5,610,371	41	19	3	22	9	4	19	9	11
1883 ..	15,070,037	7,974,038	7,095,999	28	9	5	15	1	3	13	8	2
1893 ..	15,896,879	6,911,515	8,985,364	24	0	9	10	9	0	13	11	9
1903 ..	27,799,053	12,788,675	15,010,378	33	17	10	15	11	10	18	6	0
1910 ..	39,231,792	17,051,583	22,180,209	39	10	4	17	3	6	22	6	10
1911 ..	38,574,369	19,545,879	19,028,490	38	0	2	19	5	2	18	15	0
1912 ..	42,747,155	20,976,574	21,770,581	41	2	10	20	3	9	20	19	1
1913 ..	45,275,024	22,288,302	22,986,722	42	7	3	20	17	1	21	10	2
1914 ..	48,117,543	21,856,096	26,261,447	44	2	8	20	0	11	24	1	9
1915 ..	53,477,746	21,728,834	31,748,912	48	12	10	19	15	2	28	17	8
1916 ..	59,626,220	26,339,283	33,286,937	54	4	8	23	19	2	30	5	6
1917	52,516,812	20,919,265	31,587,547	47	15	5	19	0	7	28	14	10
1918	52,750,195	24,234,007	28,516,188	47	16	6	21	19	5	25	17	1
1919 ..	84,641,773	30,671,698	53,970,075	74	9	8	26	19	10	47	9	10

A low and fluctuating level of trade was turned in 1860–63 into a rapidly increasing volume by the effect of the gold-discoveries which occurred in the early "sixties." Both imports and exports were stimulated, the former to feed and clothe an ever-increasing population, the latter by the export of gold.

After the gold rushes had subsided trade remained stationary till the expenditure of borrowed money brought the land-boom of the early "seventies." A great temporary increase of trade was succeeded by violent fluctuations and but slowly increasing trade, as the effects of the bubble were slowly worked off. It is significant that from 1873 till 1895 the world level of prices was falling continuously, and this factor contributed not a little to the depression of New Zealand. Little headway could be made against a falling price of wool and a decreasing production of gold, which were the main features of those twenty years.

But in 1895 world prices began to rise, and the effect is seen immediately in the upward rush of the external trade. On only three occasions has this upward tendency been checked—in 1908, when the commercial crisis which was felt in the Old World a year previously affected New Zealand; in

1913, on the occasion of another depression of trade; and again since 1916, as a result of shortage of shipping.

For a long period the external trade, while increasing absolutely, was declining relatively to population. Since 1895, however, trade has increased much faster than has population—doubtless largely due to increasing prices. To some extent this is probably a result of greater productivity and consequent increased purchasing-power.

The trade per head was fairly great in the early years, after 1853; but the amount was swelled by the relatively large imports which were necessary for the development of the young colony. The gold-discoveries raised the level both of imports and exports, and after 1870 the borrowing policy which was inaugurated greatly inflated trade, and especially imports. The highest level, apart from the abnormal years of the early "sixties," was reached in 1874, and the consequent reaction saw an almost continuous decrease in the *per capita* trade both in imports and exports till 1895.

It is significant that the turning-point should have come in 1895, the year in which prices turned to rise all over the world. From 1895 there has been an almost constant increase. Since the outbreak of war the total trade has increased enormously. This, of course, was largely if not entirely due to increased market values of both imports and exports.

Balance of Trade.

The relation between imports and exports is of the greatest importance to a young country like New Zealand. In the very earliest years of occupation by Europeans the exports of phormium, timber, and skins were greatly in excess of the few imports, mainly muskets and gunpowder, a fact which is explained partly by the temporary residence of the traders and more by the weaker bargaining-power of the Maori. With the settlement of the regular colony in 1840 there was evident an inflation of imports occasioned by the amount of capital the new colonists brought in for the development of the country. From 1853 to 1870 there was an excess of imports, which, however, was tending to decrease.

A temporary excess of exports was changed in the early "seventies" by another great increase of imports, due to the borrowing policy inaugurated in that period. Except for a big decrease in 1880, imports continued to be greater than exports until 1886.

From that year onward there was a continued excess of exports, except for two bad years, 1908 and 1913. In the period from 1886 to 1895 it is most marked. Fluctuations in exports have usually preceded by a year similar fluctuations in imports.

The balance of trade is intimately bound up, in later years especially, with the large imports of capital which have been brought in to assist in the development of the country. This has already been made evident in discussing the balance of trade in early years. The excess of imports from 1853 to 1870, and again from 1872 to 1886, can definitely be traced to the importation of capital in those periods.

The excess of exports in later years consists mainly of profits, interest, and other charges on the debt of New Zealand, public, local, and private.

Other items, such as remittances abroad and subsidies, also swell the balance of exports. The amount necessary in each year to pay the interest on the debt of New Zealand cannot be definitely stated, owing to the lack of data concerning the private investments in the Dominion.

The amount of interest payable on the debt of the General Government at the 31st March, 1919, was £7,299,006, but of this amount roughly forty-four per cent. must be deducted for stock held in the Dominion (see section on "Public Finance"). Added to this there is the interest on local bodies' debts of approximately twenty-six millions (of which, however, only eight millions were raised abroad), and on the private debts of the Dominion, for which no statistics are available. It is evident that some five millions are needed each year to defray the charges on the various public debts owing abroad.

Against this outgoing must be set the amount of new importations of capital in the shape of loans. While the expenditure on interest is fairly constant from year to year, the amount raised by new loans varies, and these variations are a big factor in the fluctuations of the balance of trade.

Movement of Specie and Bullion.

There is no Mint in New Zealand, while there is a fairly considerable production of gold bullion. Gold, therefore, ranks as an ordinary export of the Dominion, along with wool, frozen meat, and dairy-produce. In earlier days this export of gold was much more important than now, amounting in 1863 to 70 per cent. of the total exports, from which figure it shrank steadily to 6 per cent. in 1913.

As all coin necessary for the commerce of the Dominion must be imported from abroad, the movement of specie has in normal times afforded a ready index of the state of trade. A bad year has been reflected in an export of specie, while prosperous years have shown a steady inflow. During the war the disappearance of gold currency from circulation has, of course, somewhat modified circumstances in this respect. It is, however, still of interest to append a table showing imports and exports of specie during the ten years 1910-19.

Value of Specie imported and exported, 1910–19.

Year.	Total Specie.		Balance.	
	Imported.	Exported.	In.	Out.
	£	£	£	
1910	303,360	27,736	275,624	..
1911	763,271	48,305	714,966	..
1912	399,995	258,955	141,040	..
1913	634,670	176,359	458,311	..
1914	711,869	7,522	704,347	..
1915	1,070,114	318,090	752,024	..
1916	1,293,880	5,880	1,288,000	..
1917	177,135	70,475	106,660	..
1918	102,215	35,610	66,605	..
1919	362,531	62,150	300,381	..

The amount of gold bullion exported is shown in the following table:—

EXPORTS OF GOLD FROM NEW ZEALAND, 1910–19.

Year.	Exports.				Percentage of Total Exports.
	To United Kingdom.	To Australia.	To other Countries.	Total.	
	£	£	£	£	
1910 ..	996,081	900,237	..	1,896,318	8·55
1911 ..	379,596	1,435,655	..	1,815,251	9·54
1912 ..	394,425	950,706	..	1,345,131	6·18
1913 ..	353,763	1,105,720	16	1,459,499	6·35
1914 ..	159,499	735,811	57	895,367	3·41
1915 ..	5,060	507,659	1,181,834	1,694,553	5·34
1916 ..	134,827	510,499	553,886	1,199,212	6·01
1917 ..	690,025	213,863	..	903,888	2·86
1918 ..	275	42,116	..	42,391	0·15
1919 ..	339,533	558,656	436,216	1,334,405	2·47

COMPARISON WITH OTHER COUNTRIES.

It is customary to classify the trade of a country as "special" and "entrepôt," according as it represents exchange of domestic productions for imports for home consumption, or a mere transit trade. In many countries, such as Belgium, France, and the United Kingdom, the transit trade attains considerable importance, but New Zealand, owing to its geographical position, is precluded from developing in that direction. Her imports, except for a small forwarding trade to the Pacific islands, are for her own consumption, and the great bulk of her exports are commodities of domestic production.

The following table gives the proportion of special trade for the last ten years:—

"SPECIAL" AND "ENTREPÔT" TRADE OF NEW ZEALAND.

Year.	Trade (excluding Specie).			Re-exports (included in two preceding columns).	Percentage Re-exports.	
	Imports.	Exports.	Total.		To Imports	To Exports
	£	£	£	£		
1910	16,748,223	22,152,473	38,900,696	208,310	1·24	0·94
1911	18,782,608	18,980,185	37,762,793	198,287	1·06	1·04
1912	20,576,579	21,511,626	42,088,205	239,221	1·16	1·11
1913	21,653,632	22,810,363	44,463,995	232,473	1·07	1·02
1914	21,144,227	26,253,925	47,398,152	269,208	1·27	1·03
1915	20,658,720	31,430,822	52,089,542	392,690	1·90	1·25
1916	25,045,403	33,281,057	58,326,460	311,030	1·24	0·93
1917	20,742,130	31,517,072	52,259,202	499,590	2·41	1·59
1918	24,131,792	28,480,578	52,612,370	579,178	2·40	2·04
1919	30,309,167	53,907,925	84,217,092	665,691	2·20	1·23

Before comparisons may properly be made with the trade of other countries care must be taken to ensure that the statistics are comparable in their methods of compilation and definition.

The value of imports into New Zealand has, since 1916, been reckoned at the fair market value in the country of export at the time of exportation, plus 10 per cent. (see subsection C of this section); exports are valued f.o.b. In the United States and Canada, however, the value of imports also are calculated f.o.b., and the difference representing freight insurance, and charges amounts to about 10 per cent. of the total value. Again, in the United Kingdom the values both of imports and exports are obtained by assessment at current market prices in the United Kingdom.

A comparison of the "special" trade of various countries in the Australian Commonwealth Official Year-book, 1916, covering in most cases the latest available year before the outbreak of the war, necessarily ignores many of the elements considered above, but gives a sufficiently accurate idea of the relative trade of the various countries.

In this comparison New Zealand heads the list as regards exports of domestic produce, Belgium taking second place. For imports of articles entered for consumption in the country itself, which in the case of such countries as the United Kingdom, Belgium, &c., includes raw material imported for manufacturing purposes, New Zealand yields place only to Belgium, Switzerland, and the United Kingdom.

By themselves statistics of foreign trade are not a sure test of a country's prosperity, and they must always be interpreted with a knowledge of local conditions. An increase of imports may not be the result of increased purchasing-power, but may merely represent loans from another country, or even a failure of the home supply of certain commodities. Similarly, increased exports may mean greater productivity and increased purchasing-power, but they may also denote the payments on greatly increased liabilities.

In all countries the home trade is greatly in excess of the external trade, and in larger countries which are more self-contained a decrease in foreign trade may be due to development within the country itself. But New Zealand is far from self-contained, and from her position must attach a great importance to external trade. Under present conditions, only by export can a sufficient market be obtained for her rich resources, and only from abroad can be obtained the manufactures which are needed for common use. The development of the external trade since 1895 has been accompanied by increasing prosperity, and every advance in exports, followed in the next year by larger imports, represents an increase in the wealth of the Dominion.

SECTION XI.—COMMERCE—*continued.*

SUBSECTION B.—EXPORTS.

Method of recording Exports.

In New Zealand the Department of H.M. Customs requires for every package exported a declared statement of the contents, value, and destination. In all cases exports are valued "free on board at the port of shipment." In many cases, however, the goods are not sold till arrival at their destination, and therefore values must be assessed in New Zealand with reference to current prices. It is possible, therefore, that an interim change in the markets overseas may to some extent falsify the values given to exports.

No account is taken in the export values of "ships' stores" except where they are shipped "ex warehouse"—that is, from a bonded store under Customs control. The exports of New Zealand produce are separated from re-exports of foreign goods.

The ultimate destination of the goods is distinguished as far as is practicable, but it is impossible to discover what proportion of the exports is intended for home consumption in the country of destination. Goods for transhipment on a through bill of lading are, however, credited to the ultimate destination shown.

Development of the Export Trade.

The following table gives a summary of the main exports from New Zealand during the last ten years.

The main feature of the table is the prominence given to the primary products of the soil. The extractive industries of New Zealand have always supplied the overwhelming bulk of the exports, and, though the proportion of the different classes has varied from time to time, there has never been any considerable or even noticeable export of manufactured goods.

It will be observed that the value of exports during 1919 constituted a record.

Exports of New Zealand Produce.—Pastoral Produce.

Year.	Wool.	Frozen Meat.	Butter.	Cheese.	Tallow.	Skins, Hides, and Pelts.	Other Pastoral Produce.*
	£	£	£	£	£	£	£
1910 ..	8,308,410	3,850,777	1,811,975	1,195,373	756,841	1,129,041	468,298
1911 ..	6,491,707	3,503,406	1,576,917	1,192,057	607,257	911,519	467,695
1912 ..	7,105,483	3,909,569	2,088,809	1,680,393	684,739	1,091,871	370,616
1913 ..	8,057,620	4,449,933	2,061,651	1,770,297	663,088	1,199,375	317,181
1914 ..	9,318,114	5,863,062	2,338,576	2,564,125	694,348	1,317,593	433,331
1915 ..	10,387,875	7,794,395	2,700,625	2,730,211	780,828	1,450,276	690,398
1916 ..	12,386,074	7,271,318	2,632,293	3,514,310	785,339	1,667,679	637,409
1917 ..	12,175,366	5,982,404	2,031,551	3,949,251	553,016	1,861,817	776,194
1918 ..	7,527,266	4,957,576	3,402,223	4,087,278	847,618	2,645,864	1,170,011
1919 ..	19,559,537	9,628,292	3,080,128	7,790,990	2,680,006	3,439,468	2,432,819

* The main items in this heading are bacon and hams, beef and pork (salted), live-stock, preserved meats, sausage-skins, and preserved milk.

EXPORTS OF NEW ZEALAND PRODUCE.—MINING AND AGRICULTURAL PRODUCE.

Year.	Wheat.	Oats.	Other Agricultural Produce.*	Gold.	Coal.	Kauri-gum.	Phormium Fibre and Tow.	Timber.
	£	£	£	£	£	£	£	£
1910	216,657	44,209	220,566	1,896,318	259,562	465,044	480,519	407,658
1911	219,196	9,211	184,408	1,815,251	204,379	395,707	325,130	439,353
1912	95,702	483,756	481,147	1,345,131	216,170	401,305	407,903	490,508
1913	11,816	29,252	238,908	1,459,499	205,010	549,106	797,062	319,055
1914	3,580	165,930	278,894	895,367	282,163	497,444	492,230	422,864
1915	128	132,827	541,318	1,694,553	329,731	279,133	610,059	383,883
1916	17,835	30,200	135,680	1,199,212	326,553	339,882	1,078,632	381,488
1917	509	1,306	178,087	903,888	236,063	201,917	1,232,608	408,121
1918	460	872	194,422	42,391	227,228	157,313	1,408,147	556,309
1919	679	33,671	753,837	1,334,405	201,383	255,812	907,584	439,935

* The main items in this heading are bran and sharps, chaff, flour, barley, beans and peas, maize, malt, hops, oatmeal, potatoes, and seeds.

In recent years the proportions of the principal exports have changed a good deal. Wool, which reached its maximum percentage (47·9) in 1897, showed a tendency to decline till 1902, since when the tendency has been to regain its former pre-eminence. Frozen meat has throughout shown a steady tendency to increase.

The main feature of the period has been the great advance, relatively and absolutely, of dairy-produce, especially cheese. This advance has been shared by all classes of pastoral produce and, except for a set-back in 1919, by phormium. Agricultural produce shows a fluctuating export, reaching its highest percentage in 1899–1901, the period of the South African War.

In the following table the exports are classified under the main industries, according to a broad division, to illustrate the relative importance of the pastoral, agricultural, mining, forest, and other industries as far as the export trade is concerned. It must be remembered that in a particular industry the home trade may be relatively more important than the external trade.

The table indicates a tendency for the Dominion to rely more and more upon the pastoral industry for her main exports. The four main products of that industry—wool, frozen meat, butter, and cheese—provide an ever-increasing proportion of the total quantity of goods shipped overseas. On the other hand, the proportion of minerals has tended to fall, through decreasing exports of gold, and agricultural exports fluctuate with a downward tendency. It would seem that New Zealand is restricting her agriculture to a level barely sufficient to provide for her own needs in the matter of foodstuffs, and only in exceptionally good years is there a surplus available for export.

TABLE SHOWING PROPORTIONS OF EXPORTS SUPPLIED BY THE MAIN INDUSTRIES, 1910–1919.

	Exports.					Percentage of Total Exports.				
	Pastoral.	Mining.	Agricultural.	Forest.	Other.	Pastoral.	Mining.	Agricultural.	Forest.	Other.
	£	£	£	£	£	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1910	17,520,715	2,344,348	481,522	889,603	944,021	79·0	10·6	2·2	4·0	4·2
1911	14,750,558	2,165,137	412,815	843,310	856,670	77·5	11·4	2·2	4·4	4·5
1912	16,931,480	1,660,280	1,060,605	900,671	1,217,545	77·8	7·6	4·9	4·1	5·6
1913	18,519,145	1,791,777	279,976	874,110	1,521,714	80·6	7·8	1·2	3·8	6·6
1914	22,529,149	1,263,553	448,404	927,482	1,002,859	85·8	4·8	1·7	3·5	4·2
1915	26,534,608	2,149,217	674,273	674,533	1,716,281	83·6	6·8	2·1	2·1	5·4
1916	28,894,422	1,661,650	183,797	734,034	1,502,004	87·6	5·0	0·6	2·2	4·6
1917	27,329,599	1,274,222	179,902	711,188	1,593,046	86·5	4·0	0·6	2·3	5·0
1918	24,638,531	479,017	196,291	719,538	1,903,633	86·4	1·7	0·7	2·5	6·7
1919	48,611,240	1,668,314	788,187	698,849	1,537,794	90·7	3·1	1·5	1·3	2·8

The most noticeable feature of the above table is the extremely high proportion of the exports supplied by the pastoral industry. It is notable that the percentage supplied by this group was fairly high in the late "nineties," but in the early years of the new century fell relatively, owing mainly to increased exports of agricultural and mining produce. Since 1901, however, the percentage has increased almost continuously, a record being established in 1919, when the exports of pastoral products amounted to over 91 per cent. of the total.

On the whole, mining products are growing less important to New Zealand, mainly because of the overwhelming increase of the pastoral products. In later years especially this tendency to diminish is noticeable.

Agricultural exports showed an abnormal increase from 1899 to 1903, the period which covers the South African War, but since then their importance has declined. Their lowest level (0·6 per cent. of total exports) was reached in 1916 and 1917. Forest products, too, though steady, showed a relative downward tendency.

Measured by their value in money the exports of 1919 constituted a record, the total being not far short of double the previous year's. Wool retained its leading position, and with £19,559,537 to its credit accounted for 36 per cent. of the Dominion's total sales abroad. Frozen meat stood at £9,628,292, an increase of one-third on the figure for the previous year.

It should be mentioned, however, that an increased value is not in all cases an indication of increased output, being in many cases accountable for (especially during the war period) solely by enhanced prices. Thus, while the actual amount of wool exported in 1916 was 6 per cent. less than the quantity shipped in 1915, the value of this commodity exported showed an increase of, roughly, £2,000,000. A fuller reference to the effect of price-changes upon most of the main items will be found further on in this subsection.

In 1914 a new method of classification was adopted, and both imports and exports were divided into classes, which will in the future be adhered

to in all statistical comparisons. The total exports of each class in 1919 are shown in the following table:—

EXPORTS BY CLASSES, 1919.

No.	Class.	Domestic Produce.	Foreign Produce.
		£	£
I	Foodstuffs of animal origin (excluding live animals)	22,876,020	23,909
II	Foodstuffs of vegetable origin and common salt	590,778	46,869
III	Beverages (non-alcoholic). and substances used in making up the same	1,372	15,850
IV	Spirits and alcoholic liquors	2,575	35,334
V	Tobacco and preparations thereof ..	211	15,396
VI	Live animals	47,925	274
VII	Animal substances (mainly unmanufactured), not being foodstuffs	23,011,477	7
VIII	Vegetable substances and non-manufactured fibres	1,226,968	38,544
IXA	Apparel	187,024	22,651
IXB	Textiles	8,905	76,689
IXC	Manufactured fibres	12,411	7,377
X	Oils, fats, and waxes	2,721,169	7,312
XI	Paints and varnishes	275	7,214
XII	Stones and minerals used industrially ..	461,281	26,221
XIII	Specie	..	62,150
XIVA	Metal (unmanufactured and partly manufactured) and ores	1,478,005	2,142
XIVB	Metal manufactures, other than machinery and machines	7,002	30,634
XV	Machinery and machines	22,703	46,782
XVIA	Indiarubber and manufactures thereof (not including tires)	2,081	703
XVIB	Leather and manufactures thereof, including substitutes	65,825	9,619
XVIIA	Timber	439,935	310
XVIIB	Wood, cane, and wicker manufactures ..	2,398	770
XVIII	Earthenware, china, glass, stoneware, cement, and cement materials	9,219	2,385
XIXA	Paper	877	1,352
XIXB	Stationery	6,398	8,637
XX	Jewellery, timepieces, and fancy goods ..	110	71,299
XXI	Optical, surgical, and scientific instruments..	172	14,823
XXIIA	Drugs, chemicals, and druggists' wares ..	24,789	14,674
XXIIB	Manures	243	18
XXIII	Miscellaneous	19,935	75,746
..	Parcels-post	76,301	..
	Total	53,304,384	665,691

It will be seen that the great bulk of the exports fall into two classes—I, which includes butter and cheese, frozen meat, and fish; and VII, which includes wool, hides, skins, pelts, and hair. Mineral products fall under

XII and XIVA, and timber under XVIIA; tallow is the main item in X, phormium, seeds, and fungus in VIII, while the main agricultural products are included in II.

The re-exports are clearly shown to be spread over various manufactured items, and, indeed, are mainly returned imports, since the genuine entrepôt trade is very small.

The principal items of export may conveniently be grouped under six definite heads, and for nearly fifty years a decennial table has been published in the "Statistics of the Dominion of New Zealand" using this method of summary. A comparative statement is given below for the past five years, following the classification therein adopted.

Practically all the main commodities are homogeneous articles, and it is therefore possible to give the quantities exported. For some purposes quantities are preferable to values, since the latter contain the variable element of price.

QUANTITIES OF THE PRINCIPAL ARTICLES OF NEW ZEALAND PRODUCE EXPORTED, 1915–19.

Articles.	1915.	1916.	1917.	1918.	1919.
The mine—					
Coal .. .. (tons)	323,992	328,188	221,125	182,603	138,174
Gold .. .. (oz.)	422,825	292,620	218,624	11,987	320,210
Silver .. .. ,,	957,541	787,053	787,152	879,383	453,567
Other minerals .. (tons)	244	304	161	171	131
The fisheries—					
Fish .. .. (cwt.)	17,698	19,372	12,370	8,633	5,490
Oysters .. .. (doz.)	283,735	178,354	30,900	142,800	29,347
Whalebone .. (lb.)	896	896	..	..	..
Whale-oil .. (gal.)	40,397	22,740	46,151	64,940	114,732
The forest—					
Fungus .. .. (cwt.)	2,881	3,829	3,610	2,054	989
Kauri-gum .. (tons)	4,575	5,456	4,594	2,419	4,128
Timber, sawn and hewn .. .. (sup. ft.)	76,797,161	71,503,154	71,338,174	74,932,815	49,726,670
Pastoral products—					
Bacon and hams .. (cwt.)	3,469	2,646	1,359	3,475	425
Beef and pork, salted ,,	3,823	2,794	4,416	4,904	4,274
Butter .. .. ,,	420,144	358,632	254,397	431,023	345,818
Cheese .. .. ,,	817,258	949,416	885,743	883,430	1,572,311
Hides and skins ..(number)	516,799	510,936	237,906	320,832	440,492
Live-stock—					
Cattle ..(number)	386	297	357	402	309
Horses .. ,,	5,738	2,453	283	316	134
Sheep .. ,,	8,396	7,241	5,158	3,251	1,355
Pigs .. ,,	528	367	714	626	456
Preserved meats .. (cwt.)	61,851	65,582	55,008	74,003	218,802
Frozen meats .. ,,	3,591,260	3,326,045	2,446,945	2,036,904	3,822,683
Sausage-skins .. ,,	44,707	22,612	18,132	19,899	22,868
Rabbit-skins ..(number)	6,090,872	5,896,410	4,944,607	7,854,152	14,340,007
Sheep skins and pelts ,,	9,093,850	8,335,570	6,528,053	8,741,538	8,501,756
Tallow .. .. (cwt.)	535,260	449,440	251,980	328,420	937,480
Wool .. .. (lb.)	196,570,114	185,506,859	178,274,486	108,724,575	274,246,613

QUANTITIES OF THE PRINCIPAL ARTICLES OF NEW ZEALAND PRODUCE EXPORTED, 1915-19—*continued.*

Articles.		1915.	1916.	1917.	1918.	1919.
Agricultural products—						
Bran and sharps ..	(tons)	6,629	619	340	275	543
Chaff	,,	27,032	386	354	249	575
Flour	,,	173	131	744	1,541	2,876
Grain—						
Barley ..	(centals)	11,153	429	911	412	705
Beans and peas	,,	121,165	50,501	66,705	54,297	252,892
Oats	,,	273,061	88,106	2,307	1,300	57,031
Wheat ..	,,	216	41,287	902	674	974
Hops	(cwt.)	4,336	4,358	2,805	2,010	2,214
Oatmeal ..	(tons)	18	11	16	87	78
Potatoes ..	,,	19,572	1,724	727	440	3,603
Seeds (grass and clover)	(cwt)	13,980	9,841	16,484	15,995	49,906
Miscellaneous—						
Ale and beer ..	(gal.)	23,025	11,948	11,989	12,782	16,303
Cordage ..	(cwt.)	10,654	6,508	7,872	7,359	3,354
Leather ..	,,	6,678	3,499	845	2,228	4,433
Phormium fibre and tow	(tons)	26,685	32,252	26,016	26,982	25,609
Soap	(cwt.)	6,973	9,748	9,287	7,361	6,588

The values of these principal commodities are tabulated in the following pages, and the statement of exports is rendered complete by the addition of miscellaneous groups and the provision of totals for each group and for all combined.

VALUE OF PRINCIPAL ARTICLES EXPORTED, 1915-19.

Articles.	1915.	1916.	1917.	1918.	1919.
The mine—	£	£	£	£	£
Coal	329,731	326,553	236,063	227,228	201,383
Gold	1,694,553	1,199,212	903,888	42,391	1,334,405
Silver	93,583	85,111	105,299	171,456	103,037
Other minerals	29,350	50,774	28,972	37,942	29,489
Totals	2,149,217	1,661,650	1,274,222	479,017	1,668,314
The fisheries—					
Fish	37,166	37,475	23,818	19,202	17,425
Oysters	2,057	1,340	244	1,114	342
Whalebone	250	280	..	..	..
Whale-oil	3,011	1,647	5,511	12,618	22,908
Other	2,412	1,751	201	25	402
Totals	44,896	42,493	29,774	32,959	41,077
The forest—					
Fungus	9,709	12,227	10,682	5,784	2,523
Kauri-gum	279,133	339,882	291,917	157,313	255,812
Timber	383,883	381,488	408,121	556,309	439,935
Other	1,808	437	462	132	579
Totals	674,533	734,034	711,188	719,538	698,849

VALUE OF PRINCIPAL ARTICLES EXPORTED, 1915–19—*continued.*

Articles.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Pastoral products—					
Bacon and hams	15,717	13,329	7,974	21,001	2,993
Beef and pork, salted ..	7,227	5,647	11,310	13,862	11,787
Butter	2,700,625	2,632,293	2,031,551	3,402,223	3,080,128
Cheese	2,730,211	3,514,310	3,949,251	4,087,278	7,790,990
Hides and skins	573,765	673,641	456,308	532,510	969,483
Live-stock—					
Cattle..	7,357	5,612	11,381	16,743	8,914
Horses	154,488	79,720	20,447	29,544	27,715
Sheep..	26,594	23,089	19,096	16,933	7,311
Pigs	1,954	1,453	3,122	4,350	3,100
Other..	2,160	453	485	1,033	885
Preserved milk and cream..	20,388	23,780	153,538	341,797	579,266
Preserved meats	223,666	249,519	278,753	420,179	1,283,218
Frozen meats	7,794,395	7,271,318	5,982,404	4,957,576	9,628,292
Sausage-skins	192,028	196,785	227,431	257,871	324,001
Rabbit-skins	59,004	76,405	105,321	299,765	775,118
Sheep skins and pelts ..	826,507	917,633	1,300,188	1,813,589	1,694,867
Tallow	780,828	785,339	553,016	847,618	2,630,006
Wool	10,387,875	12,386,074	12,175,366	7,527,266	19,559,537
Other	38,819	38,022	42,657	46,498	183,629
Totals	26,534,608	28,894,422	27,329,599	24,638,531	48,611,240
Agricultural products—					
Bran and sharps	52,051	3,702	2,111	1,827	4,555
Chaff	154,552	2,727	2,017	3,155	5,875
Flour	2,678	2,154	13,595	29,341	53,188
Fruits	21,603	7,493	722	307	1,729
Grain and pulse—					
Barley	5,318	218	513	307	481
Beans and peas ..	77,022	38,545	72,077	71,282	319,516
Oats	132,827	30,200	1,306	872	33,671
Wheat	128	17,835	509	460	679
Other..	168	723	889	1,240	3,973
Hops	18,536	17,632	12,038	11,284	16,301
Oatmeal	336	271	340	2,083	3,267
Onions	7,475	3,778	9,814	2,099	6,018
Potatoes	135,552	14,941	5,816	4,279	38,718
Seeds (grass and clover) ..	42,314	34,266	48,635	42,215	249,886
Seeds (various)	7,459	7,622	6,937	24,372	49,127
Other	16,254	1,090	1,683	1,218	1,203
Totals	674,273	183,797	179,902	196,291	788,187
Miscellaneous (including manufactures)—					
Ale and beer	3,223	1,661	1,456	1,442	2,505
Apparel	37,606	36,589	55,808	92,814	136,045
Cement	28,503	18,711	5,506	7,651	6,976
Cordage	2,571	17,553	22,781	26,680	10,525
Foods, infants' and invalids'	45,297	37,890	31	6	12
Leather	61,795	35,143	10,458	28,095	64,645
Phormium fibre and tow ..	610,059	1,078,632	1,232,608	1,408,147	907,584
Soap	9,260	12,393	14,846	14,724	14,069
Sugar	24,663	48,183	62,102	19,238	26,699
Woollen manufactures ..	18,592	19,504	8,780	10,632	8,866
Other	115,515	153,252	148,896	261,295	318,788
Totals	965,335	1,459,511	1,563,272	1,870,674	1,496,717
Total exports (domestic produce)	31,042,862	32,975,907	31,087,957	27,937,010	53,304,384
Specie	318,090	5,880	70,475	35,610	62,150
Re-exports	387,960	305,150	429,115	543,568	603,541
Total exports ..	31,748,912	33,286,937	31,587,547	28,516,188	53,970,075

Destination of New Zealand Exports.

The first exports from New Zealand went naturally to the earlier-developed sister colony, and for a considerable time Australia had a monopoly of our trade. In 1865 70 per cent., and in 1871 44 per cent., of the total exports went to Australia. But since the establishment of direct shipping lines with the United Kingdom the Mother-land has absorbed the bulk of New Zealand exports, and four-fifths of the total exports normally go to the United Kingdom. This proportion has prevailed with but slight variations for forty years, the most notable variation being the marked fall in 1918 in the proportion of the total exports destined for that country. The total amount sent to Australia fluctuates considerably from year to year, usually rising if the products of the Commonwealth are reduced by drought.

During and since 1916 exports to the United States have exceeded those to Australia. This increase has been mainly confined to raw materials, the items concerned being fairly uniformly distributed throughout this group. Ceylon, the South African Union, and Hong Kong within the Empire, and France, Belgium, and Uruguay among foreign countries, were prior to the war probably the most reregular customers, though the abnormal conditions of the last six years have dislocated their trade and given to Egypt an importance hitherto unknown. An interesting recent feature is the fluctuation of exports (principally wool) to Japan, which rose from a modest £377 in 1911, to £137,464 in 1915, falling again to £8,178 in 1919.

—	United Kingdom.	Australia.	Canada.	Pacific Islands.*	United States.	Germany.	Other Countries.†	Total.
	£	£	£	£	£	£	£	£
1910	18,633,118	2,010,751	160,842	296,244	553,603	205,931	319,720	22,180,209
1911	15,134,743	2,515,168	199,587	324,306	434,586	170,493	249,607	19,028,490
1912	16,861,256	2,848,664	542,271	338,621	620,988	254,703	304,078	21,770,581
1913	18,130,160	2,315,747	606,662	295,032	912,051	337,448	389,622	22,986,722
1914	21,383,891	1,928,410	595,611	326,025	1,028,054	456,163	543,293	26,261,447
1915	25,389,030	2,548,605	925,813	499,063	2,006,507	4	379,890	31,748,912
1916	26,869,988	2,191,545	691,986	368,069	2,493,987	5	671,357	33,286,937
1917	26,023,396	1,460,980	961,683	540,380	1,894,317	6	706,785	31,587,547
1918	18,244,250	1,803,739	1,793,576	511,842	4,045,648	..	2,117,133	28,516,188
1919	44,312,048	2,249,827	980,190	548,112	4,200,861	..	1,679,037	53,970,075

* Includes Cook Islands prior to 1902. † The principal other countries are Hong Kong, India, France, Egypt, and Japan.

On the average only about four-fifths of the exports from New Zealand to the United Kingdom are normally retained in that country, and the remaining fifth is distributed to Europe and America. Even deducting this re-export trade, the Mother-country may be said to retain two-thirds of the total exports from the Dominion. The following table must be read in conjunction with the fact that in the case of a large proportion of the goods shipped to London

that port is regarded merely as a convenient depot whence they may be retransferred to other countries:—

DESTINATION OF EXPORTS, 1910–1919.

Year.	United Kingdom.	British Colonies and Possessions.	Foreign Countries.	Total.
	£	£	£	£
1910 ..	18,633,118	2,468,119	1,078,972	22,180,209
1911 ..	15,134,743	2,966,952	926,795	19,028,490
1912 ..	16,861,256	3,641,276	1,268,049	21,770,581
1913 ..	18,130,160	3,135,957	1,720,605	22,986,722
1914 ..	21,383,891	2,724,965	2,152,591	26,261,447
1915 ..	25,389,030	3,694,453	2,665,429	31,748,912
1916 ..	26,869,988	3,122,187	3,294,762	33,286,937
1917 ..	26,023,396	2,635,002	2,929,149	31,587,547
1918 ..	18,244,250	3,808,892	6,466,046	28,516,188
1919 ..	44,312,048	3,750,655	5,907,372	53,970,075

In the following table exports have been grouped in accordance with the classification adopted by the British Board of Trade in many of its tables. As might be expected, the classification shows that raw material (other than foodstuffs) is the largest of the five divisions, food, drink, and tobacco coming next. Many of the most important items in this latter class are raw materials also, and the table is a further illustration of the fact that New Zealand is essentially a primary-producing country. Exports of manufactures in 1919 constituted only 6·47 per cent. of the total. A similar table given in the Imports subsection of this book shows that the reverse is the case in respect of imports—namely, a preponderance of manufactured goods received into the Dominion.

Countries.	Food, Drink, and Tobacco.	Raw Materials and Articles mainly unmanufactured.	Articles wholly or mainly manufactured.	Miscellaneous and Unclassified (including Parcels-post).	Bullion and Specie.	Total.
	£	£	£	£	£	£
United Kingdom ..	21,454,044	19,886,184	2,401,561	224,587	345,672	44,312,048
British Possessions.						
Europe—						
Gibraltar	..	..	..	2	..	2
Malta	..	..	..	4	..	4
Asia—						
Ceylon	177	..	..	301	..	478
Hong Kong	334	2,518	709	72	8,630	12,263
India	78,315	70,160	370	775	179,254	328,874
Straits Settlements ..	2,136	..	3,135	165	22,771	28,207
Other British possessions in Asia	..	..	..	19	8	27

Countries.	Food, Drink, and Tobacco.	Raw Materials and Articles mainly unmanufactured.	Articles wholly or mainly manufactured.	Miscellaneous and Unclassified (including Parcels-post).	Bullion and Specie.	Total.
British Possessions—contd.	£	£	£	£	£	£
Africa—						
South African Union ..	1,263	..	585	393	..	2,241
Other British possessions in Africa	..	..	308	69	..	377
America—						
Canada	176,585	673,219	120,918	9,473	..	980,190
Other British possessions in America	..	..	..	16	..	16
Pacific Islands—						
Australia	242,272	953,945	284,371	160,376	608,863	2,249,827
British Solomon Islands Protectorate	1,632	34	820	24	..	2,510
Fanning Island ..	303	..	82	..	1,000	1,385
Fiji	80,593	15,428	40,403	4,137	274	140,835
Gilbert and Ellice Islands	190	675	54	1	..	920
Norfolk Island ..	528	..	268	26	..	822
Papua	1,598	..	48	23	..	1,669
Other British possessions in Pacific islands	5	..	..	3	..	8
Foreign Countries and Possessions.						
Europe—						
France	27	98,243	..	303	..	98,573
Italy	17,378	3,929	49,416	90	..	70,813
Norway	..	963	..	33	..	996
Switzerland	..	..	580	1,533	..	2,113
Other foreign possessions in Europe	8	..	..	169	..	177
Asia—						
China	..	..	349	418	32,012	32,779
Japan	123	1,592	6,192	271	..	8,178
Java	..	..	817	12	..	829
Malay States	..	..	4,000	70	..	4,070
Persia	..	..	27,000	..	..	27,000
Other foreign possessions in Asia	1	..	34	69	..	104
Africa—						
Egypt	1,049,840	..	9,682	61	..	1,059,583
Other foreign possessions in Africa	..	..	..	7	..	7
America—						
Argentina	..	..	..	23	..	23
United States of America	304,143	3,195,352	434,320	32,048	234,998	4,200,861
Uruguay	..	..	..	16	..	16
Other American possessions	..	401	879	7	..	1,287
Pacific Islands—						
German Samoa ..	54,324	2,198	36,142	398	..	93,062
Hawaii	1,636	1	46	363	..	2,046
Society Islands ..	78,530	13,493	23,475	7,671	..	123,169
Tonga	56,183	3,772	44,175	1,935	61,150	167,215
Tutuila	1,487	37	408	11	..	1,943
Other foreign Pacific islands	4,657	6,757	1,092	22	..	12,528
Totals	23,608,312	24,928,901	3,492,234	445,996	1,494,632	53,970,075

In order to give further detail concerning the destination of the main exports a number of tables are appended showing the details for five years for each of the principal articles.

Destination of Main Exports, 1915–19.

Country to which exported.	1915.	1916.	1917.	1918.	1919.
Wool.					
	lb.	lb.	lb.	lb.	lb.
United Kingdom ..	183,011,230	162,452,392	168,062,049	80,502,867	258,388,501
India	..	..	..	..	1,031,906
Canada	2,881,566	2,508,349	3,620,449	8,191,769	49,661
Australia	1,579,063	555,881	..	523,057	..
Belgium	..	..	..	..	..
France	..	4,369,748	6,591,988	11,328,194	1,482,037
Germany	..	..	..	..	..
Japan	2,998,791	2,182,035	..	..	..
United States of America	6,113,073	13,438,854	..	8,178,688	13,294,508
Other countries ..	..	..	..	..	..
Totals ..	196,583,723	185,507,259	178,274,486	108,724,575	274,246,613
Frozen Meat.					
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
United Kingdom ..	3,582,602	3,319,911	2,438,456	1,537,671	3,469,842
Canada	221	..	2,584	70,671	18,671
Pacific islands ..	2,805	467	547	603	556
Australia	4,603	5,667	11	275	..
Gibraltar	..	..	..	..	..
United States of America	1,025	..	..	638	1,888
Egypt	..	..	25,334	427,034	331,724
Other countries ..	4	..	..	..	..
Totals ..	3,591,260	3,326,045	2,466,932	2,036,892	3,822,681
Butter.					
United Kingdom ..	371,959	336,412	250,721	415,250	336,606
South African Union ..	200	..	..	..	..
Canada	18,838	3,557	304	11,893	6,000
Pacific islands ..	3,791	3,094	1,872	1,495	2,126
Australia	25,289	15,566	1,499	436	6
United States of America	87	3	1	..	..
Other countries ..	..	..	..	1,949	1,080
Totals ..	420,144	358,632	254,397	431,023	345,818
Cheese.					
United Kingdom ..	803,917	942,773	865,152	844,198	1,517,102
India	19	63	23	2	14,973
South African Union ..	1,971	1,574	..	..	..
Pacific islands ..	278	230	279	233	372
Australia	10,729	4,682	314	256	105
Egypt	..	..	19,975	38,646	39,796
Other countries ..	344	85	..	110	5
Totals ..	817,258	949,416	885,743	883,445	1,572,353
Tallow.					
	Tons.	Tons.	Tons.	Tons.	Tons.
United Kingdom ..	26,599	22,333	9,672	3,529	36,170
Pacific islands ..	68	127	143	109	87
Australia	92	12	464	96	240
Canada	4	..	1,256	5,872	2,261
United States of America	..	..	375	6,018	6,985
Other countries ..	..	..	689	797	1,131
Totals ..	26,763	22,472	12,599	16,421	46,874
Hides (Horse and Cattle).					
	Number.	Number.	Number.	Number.	Number.
United Kingdom ..	69,013	32,084	98,142	53,848	9,996
Canada	150,758	114,488	72,633	82,942	89,013
Australia	49,703	151,624	7,551	65,736	118,506
Fiji	..	..	..	..	3
United States of America	889	..	..	6,434	103,936
Other countries ..	..	..	..	..	435
Totals ..	270,363	298,196	178,326	208,960	321,889

DESTINATION OF MAIN EXPORTS, 1915–19—*continued.*

Country to which exported.	1915.	1916.	1917.	1918.	1919.
			RABBIT-SKINS.		
	Number.	Number.	Number.	Number.	Number.
United Kingdom ..	5,323,176	4,819,597	879,483	254,868	3,032,188
Canada	98,400	..	1,611,089	2,871,980	1,633,067
Australia	255,241	225,551	201,822	52,917	39,485
United States of America	412,555	851,132	2,252,213	4,674,387	9,635,267
Other countries ..	1,500	130	..	..	..
Totals ..	6,090,872	5,896,410	4,944,607	7,854,152	14,340,007
			SHEEP SKINS AND PELTS.		
United Kingdom ..	8,375,638	4,141,630	1,786,153	65,163	2,638,378
Canada	301,075	440,138	49,327	340,620	530,492
Australia	374,333	433,370	205,809	123,370	22,466
United States of America	42,804	3,320,394	4,486,764	8,212,385	5,310,420
Other countries ..	..	38	..	..	..
Totals ..	9,093,850	8,335,570	6,528,053	8,741,538	8,501,756
			SAUSAGE-SKINS.		
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
United Kingdom ..	34,120	6,511	..	4	3,451
Canada	322	2,295	2,390	3,527	3,537
Australia	1,662	1,635	650	1,767	2,182
Germany	..	..	..	..	..
Russia	..	..	..	..	..
United States of America	8,604	12,171	15,091	14,600	13,738
Other countries ..	..	1	1	1	2
Totals ..	44,708	22,613	18,132	19,899	22,910
			WHEAT.		
	Centals.	Centals.	Centals.	Centals.	Centals.
United Kingdom ..	..	40,570	..	..	3
Pacific islands ..	206	93	890	660	974
Australia ..	10	624	12	14	..
Other countries ..	..	..	..	..	..
Totals ..	216	41,287	902	674	977
			OATS.		
United Kingdom ..	8,257	..	..	..	1,526
Ceylon	1,629	1,514	..	..	..
Pacific islands (other than Fiji)	2,844	1,371	1,555	1,009	996
Australia	258,202	2,393	398	170	54,801
Fiji	279	278	419	121	605
Brazil	..	..	..	..	..
Uruguay	713	..	..	..	..
Other countries ..	1,137	82,550	..	..	3
Totals ..	273,061	88,106	2,372	1,300	57,931
			BEANS AND PEAS.		
United Kingdom ..	79,912	23,454	56,070	43,517	230,492
Canada	60	1,961	2,684	45	..
South African Union ..	..	1	..	..	..
Australia	34,888	24,042	7,258	10,251	15,987
Fiji	2	2	16	10	9
France	..	498	176	..	..
United States of America	6,018	711	476	444	9,294
Pacific islands ..	..	..	..	..	49
Other countries ..	285	202	25	30	..
Totals ..	121,165	50,871	66,705	54,297	255,831

DESTINATION OF MAIN EXPORTS, 1915–19—*continued.*

Country to which exported.	1915.	1916.	1917.	1918.	1919.
			POTATOES.		
	Tons.	Tons.	Tons.	Tons.	Tons.
Pacific islands (other than Fiji)	262	190	197	176	216
Australia	18,145	1,029	..	1	2,810
Fiji	418	517	532	26	577
Argentine Republic ..	..	..	..	..	..
Brazil	95	..	..	..	..
Other countries ..	655	2	10	1	20
Totals ..	19,575	1,738	739	440	3,623
			SEEDS (GRASS AND CLOVER).		
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
United Kingdom ..	6,579	6,669	5,230	778	24,289
Canada	424	60	351	140	1,817
Pacific islands (other than Fiji)	26	5	1	3	19
South African Union ..	..	..	..	..	..
Australia	7,809	2,212	8,398	10,659	18,153
Fiji	..	3	1	..	21
Germany	..	..	..	..	..
United States of America	242	1,475	5,111	4,415	7,008
Uruguay	1	..	..	..	..
Other countries ..	..	2	..	..	..
Totals ..	15,081	10,426	19,092	15,995	51,307
			GOLD.		
	Oz.	Oz.	Oz.	Oz.	Oz.
United Kingdom ..	1,417	32,866	165,001	70	82,009
Australia	126,922	127,345	53,623	11,917	133,220
Other countries ..	294,498	132,409	..	..	104,981
Totals ..	422,837	292,620	218,624	11,987	320,210
			COAL.		
	Tons.	Tons.	Tons.	Tons.	Tons.
United Kingdom ..	185,616	115,682	102,970	90,010	85,299
Canada	3,350	5,330	5,532	4,959	5,947
Pacific islands (other than Fiji)	12,900	5,724	9,166	6,085	10,530
Australia	36,444	51,972	32,073	26,773	26,496
Fiji	12,915	17,391	12,672	4,871	6,109
Egypt	29,621	25,246	206	2,506	..
Argentine Republic ..	1,400	..	..	..	..
Chile	4,140	1,815	994	1,100	247
United States of America	5,072	17,999	15,643	16,527	12,486
Guam	32,817	40,705	46,087	29,372	3,125
Other countries ..	1,993	49,811	3,500	400	54
Totals ..	326,268	331,675	228,843	182,603	150,293
			KAURI-GUM.		
United Kingdom ..	1,172	1,516	620	69	1,771
Canada	56	237	1,229	1,167	703
Australia	9	31	11	56	19
Belgium ..	..	..	..	..	..
Austria-Hungary ..	..	..	..	..	..
France ..	5	..	..	..	..
Germany ..	..	..	..	..	..
Italy	..	..	..	..	..
Netherlands	..	..	..	..	..
Russia	21	15	35	..	..
Sweden	..	..	..	..	..
United States of America	3,312	3,649	2,689	1,127	1,635
Other countries ..	..	8	10	..	..
Totals ..	4,575	5,456	4,594	2,419	4,128

DESTINATION OF MAIN EXPORTS, 1915–19—*continued.*

Country to which exported.	1915.	1916.	1917.	1918.	1919.
PHORMIUM FIBRE.					
	Tons.	Tons.	Tons.	Tons.	Tons.
United Kingdom ..	15,369	15,288	7,669	3,286	10,911
Canada	237	1,444	3,538	1,572	1,489
Australia	5,538	4,722	3,249	4,556	3,764
United States of America	2,076	6,219	9,059	15,568	6,059
Other countries ..	..	1	1	185	124
Totals ..	23,220	27,674	23,516	25,167	22,347
TIMBER (SAWN AND HEWN).					
	Sup. ft.	Sup. ft.	Sup. ft.	Sup. ft.	Sup. ft.
United Kingdom ..	1,438,249	340,490	163,988	45,800	149,199
Pacific islands (other than Fiji)	408,451	309,054	665,975	619,708	290,532
Australia	73,811,328	69,168,629	68,725,732	72,965,071	48,900,372
Fiji	1,173,899	1,692,821	1,801,860	1,301,936	394,891
Other countries ..	360	..	..	300	5,268
Totals ..	76,832,287	71,510,994	71,357,555	74,932,815	49,740,262

RE-EXPORTS.

The forwarding trade of New Zealand has never at any time been of great significance, indeed, prior to 1914 on only one occasion, in 1907, did the amount exceed a quarter of a million sterling. Since 1913, however, the amount has rapidly increased. Items of re-exports consist partly of goods returned from New Zealand either as unsuitable or as finished with, though the bulk of the total amount is made up by various classes of machinery, hardware, metal manufactures, motor-cars, and also items such as apparel, books, tobacco, and spirits.

There is, however, a genuine entrepôt trade with the islands of the Pacific, the amount of which is still comparatively small. Exports to Cook Islands, which are treated as part of the Dominion, are not included in the figures of either exports or re-exports.

The amounts for the last twenty years of the re-exports of New Zealand are shown in the table below:—

RE-EXPORTS OF BRITISH, FOREIGN, AND OTHER COLONIAL PRODUCE (EXCLUDING SPECIE).

	£		£		£
1899 ..	123,682	1906 ..	152,134	1913 ..	232,473
1900 ..	168,009	1907 ..	278,503	1914 ..	269,208
1901 ..	179,350	1908 ..	180,675	1915 ..	387,960
1902 ..	136,860	1909 ..	173,215	1916 ..	305,150
1903 ..	133,734	1910 ..	208,310	1917 ..	429,115
1904 ..	136,963	1911 ..	198,287	1918 ..	543,568
1905 ..	138,539	1912 ..	239,221	1919 ..	603,541

The destination of this re-export trade is shown in the following table for 1915–19:—

Country.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
United Kingdom ..	122,379	40,577	50,245	103,580	113,267
Australia	144,104	144,406	217,168	261,814	263,689
Fiji	18,991	24,480	36,434	36,927	40,934
Canada	2,371	5,828	6,670	7,009	17,744
Germany	..	..	..	..	..
United States of America	4,481	11,926	24,697	17,008	24,364
Tonga or Friendly Islands	18,242	10,364	23,881	33,051	42,257
Samoa or Navigator Islands	26,055	22,355	26,201	25,350	31,182
Tahiti or Society Islands	19,523	14,665	18,019	27,183	23,168
Other countries ..	31,814	30,549	25,800	31,646	46,936
Totals	387,960	305,150	429,115	543,568	603,541

Effect of Prices on Values of Exports.

The following table illustrates the effect of prices on the New Zealand exports. The gain to New Zealand on the ten principal items quoted amounts to over 25½ millions for the two years ended 31st March, 1919 and 1920, when assessed on the values for the same items in the calendar year 1914.

Ten Principal Exports of New Zealand for the Calendar Years 1918 and 1919, showing Actual Values and Values when assessed at Prices ruling in the Calendar Year 1914.

Item.	1914.	1918.		1919.		Difference for Two Years.
		Actual Value.	Value of Quality exported assessed at 1914 Prices.	Actual Value.	Value of Quality exported assessed at 1914 Prices.	
	£	£	£	£	£	£
Wool	9,318,114	7,527,266	4,588,938	19,559,537	11,590,818	10,907,047
Mutton (frozen) ..	2,115,080	1,922,941	1,293,400	4,470,290	2,980,096	2,119,735
Lamb (frozen) ..	2,554,517	1,220,832	930,634	3,063,769	2,332,122	1,021,845
Beef (frozen) ..	1,029,529	1,661,187	1,221,980	1,770,766	1,304,429	905,544
Butter	2,338,576	3,402,223	2,322,175	3,080,128	1,363,126	2,297,050
Cheese	2,564,125	4,087,278	2,622,471	7,790,990	4,667,416	4,588,381
Hides	358,618	490,150	347,894	892,080	535,908	498,428
Tallow	694,348	847,618	465,100	2,080,006	1,327,631	1,734,893
Phormium ..	455,214	1,387,763	581,908	866,930	516,327	1,156,458
Timber, sawn and hewn	422,545	556,270	380,039	439,935	252,116	364,050
	21,850,666	23,103,528	14,754,539	44,614,431	27,369,989	25,593,431

EXPORTS FROM VARIOUS PORTS.

The following table shows the total values of the exports from each port of New Zealand, arranged in order of magnitude, in 1919. In order to eliminate any temporary fluctuation an annual average has been taken over five-yearly periods since 1896 and contrasted with the figures for 1919.

EXPORTS FROM VARIOUS PORTS.

Port.	Yearly Average of Quinquennial Periods.				Year 1919.
	1896–1900.	1901–5.	1906–10.	1911–15.	
	£	£	£	£	£
Auckland ..	1,649,238	2,334,369	3,374,789	4,031,432	9,847,296
Wellington ..	1,825,895	2,612,896	3,692,669	5,684,827	9,506,957
Lyttelton ..	2,107,449	2,431,547	2,704,521	3,153,723	6,702,130
Napier	950,614	944,293	1,674,638	2,000,657	4,504,387
Wanganui ..	337,319	350,039	409,526	673,035	3,975,354
Gisborne ..	347,603	512,749	992,554	1,373,145	3,466,502
Dunedin ..	1,155,387	1,488,901	1,500,952	1,619,348	3,366,731
Invercargill ..	700,580	888,637	1,173,801	1,442,996	2,874,580
Patea	43,361	230,195	510,504	738,668	2,369,581
Timaru	645,843	876,514	1,142,524	1,273,164	2,214,237
New Plymouth ..	351,452	400,357	554,135	591,212	2,133,601
Wairau (including Picton)	133,786	186,196	285,991	311,187	836,317
Waitara ..	*	99,329	292,503	366,326	555,265
Oamaru.. ..	247,180	239,419	225,308	259,294	539,539
Nelson	60,168	88,601	94,608	173,964	482,660
Greymouth ..	239,553	419,547	376,185	403,297	330,820
Kaipara ..	112,311	150,817	138,023	124,830	54,507
Hokitika ..	52,147	39,113	32,133	28,277	47,885
Tauranga ..	137	..	..	5,648	43,326
Westport ..	38,501	75,769	58,533	59,070	42,099

* Included in New Plymouth.

EXPORTS FOR YEARS ENDED 30TH JUNE.

It has been noticed repeatedly that the calendar year is a bad period for which to calculate exports of New Zealand produce. These exports consist almost wholly of seasonal products, and the calendar year often splits the seasons. The largest export, wool, is sheared from the sheep in the early summer, and the wool-sales are held in December and January. Exports of any season's wool-clip are therefore divided between one year and the next in varying proportion. A favourable season or, as in 1914, a sudden demand may cause a great increase of exports in the December quarter, with the result that the March quarter of the next year shows low figures. The wool trade invariably bases its calculations on each season's clip, not on calendar years.

The same argument holds good in the case of butter and cheese, which are almost wholly exported in December and March quarters. It is desirable, therefore, to tabulate New Zealand exports for years ending in June instead

of December, since this division does not split the seasonal production of any main commodity, and more truly shows the results of each season as compared with previous seasons. The following table gives this information for the principal items of export during each of the last nine "June" years.

PRINCIPAL EXPORTS OF DOMESTIC PRODUCE FROM NEW ZEALAND FOR YEARS ENDING 30TH JUNE, 1915 TO 1920 (INCLUSIVE).

Article.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£
The mine—					
Coal	292,447	249,106	270,028	195,573	147,547
Gold	2,134,256	529,878	927,943	635,717	1,085,483
Silver	107,851	89,651	139,214	128,464	123,475
Fisheries—					
Fish	41,914	30,785	24,057	17,374	33,009
The forest—					
Kauri-gum ..	332,308	330,433	220,085	193,902	556,744
Timber (sawn and hewn)	387,370	422,281	457,317	517,182	544,229
Pastoral products—					
Beef, salted ..	5,331	7,912	14,198	10,821	21,942
Butter	2,805,152	2,767,150	3,232,788	3,592,875	2,257,145
Cheese	3,345,314	3,982,089	4,010,842	5,501,452	6,930,178
Hides	626,834	343,858	558,560	707,057	1,071,639
Live-stock ..	119,245	54,265	66,239	40,920	54,838
Meat, preserved ..	231,113	268,323	534,256	924,934	134,186
,, frozen ..	7,523,788	6,953,944	6,414,471	4,911,582	5,636,560
Sausage-skins ..	217,709	212,110	243,745	262,288	518,033
Skins, rabbit ..	56,078	79,182	258,246	209,702	532,208
,, sheep ..	887,014	1,136,923	1,002,476	1,937,242	2,754,076
Tallow	698,605	767,313	615,464	1,613,250	2,155,753
Wool	12,127,697	10,628,359	9,519,199	15,378,923	13,206,083
Agricultural products—					
Beans and peas ..	66,172	40,804	97,902	170,012	142,844
Oats	15,922	28,839	1,228	4,758	50,027
Wheat	211	17,940	491	401	1,075
Hops	18,474	18,792	6,129	18,409	12,677
Potatoes ..	130,399	6,199	5,036	7,722	41,280
Seeds, grass and clover	42,043	43,331	44,912	98,066	247,340
Miscellaneous—					
Leather ..	57,608	23,894	29,360	47,133	11,067
Phormium ..	778,966	1,221,184	1,553,791	1,059,316	656,553
Other New Zealand produce	712,192	646,821	794,428	1,523,115	6,927,499
Totals ..	33,762,013	30,901,366	31,042,315	39,708,190	45,853,490

EXPORTS TO COOK ISLANDS.

In 1901 a group of Pacific islands was annexed to New Zealand, and has since been administered by the Dominion. The islands are fertile and rich in tropical products, so that there is a growing trade between

them and the Dominion proper. This trade is not regarded as external to New Zealand, but merely as interchange between different parts of the Dominion, and it is therefore not included in the account of the external trade. Separate returns are made of the transactions between the Dominion and its dependent islands.

TOTAL VALUE OF EXPORTS FROM NEW ZEALAND TO COOK AND OTHER ANNEXED ISLANDS SINCE 1901.

Year.	Exports.	Year.	Exports.
	£		£
1901	21,849	1911	56,131
1902	22,973	1912	75,774
1903	27,965	1913	72,046
1904	28,644	1914	59,056
1905	29,098	1915	55,459
1906	35,452	1916	52,831
1907	38,288	1917	53,449
1908	39,284	1918	79,309
1909	40,204	1919	88,902
1910	60,647		

EXPORTS TO GERMAN SAMOA.

The occupation of German Samoa by New Zealand troops in August, 1914, has led to an expansion of the Dominion's trade with those islands. This development arose in the first place from the necessity for sending stores, &c., from New Zealand for the troops, but there is evidence now of considerable interchange of commodities between New Zealand and the settlers in the Group. Exports from the Dominion to German Samoa during the last six years have been as follows:—

	£		£
1914	59,938	1917	119,049
1915	113,143	1918	84,241
1916	71,781	1919	93,062

SUBSECTION C.—IMPORTS.

Method of Recording.

An exact and detailed account is kept of all imports of merchandise into New Zealand from overseas, and the Customs Department insists on full and accurate descriptions of all goods passing under its control. Entries must be passed and invoices presented for every package imported, and the quantities and values stated on the entries must be supported by declaration. The detailed nature of the tariff makes it essential that all goods should be described minutely under the tariff headings, and care is also taken to furnish statistical information concerning quantities. In the case of goods chargeable with specific duties the quantities are ascertained by examination in support of the invoices.

Prior to 1916 the import value taken was the c.i.f. or landed value in New Zealand, thus including freight into the Dominion. For free goods and goods liable to specific duties this landed value in New Zealand was insisted upon. But the landed value for *ad valorem* goods was defined as the fair market value of the goods when sold for home consumption in the principal markets of the country whence imported, and at the time when imported, plus 10 per cent.—*i.e.*, the f.o.b. invoice value, plus a uniform 10 per cent. to cover the cost of freight, &c. From and including the year 1916, however, the value shown for *all* merchandise imported is the fair market value in the country of export at the time of exportation, plus 10 per cent. Fair market value is accepted as the wholesale value, less all the usual trade discounts, but including all special discounts. Since 1914 the ordinary cash discount has been allowed, and the value of casing or packing may also be deducted if shown separately.

Passengers' baggage is omitted from the total of imports in each year, except where dutiable items are included. Personal luggage is exempt from duty upon declaration that the goods are personal property, not intended for sale, have been in use for twelve months, and do not exceed £100 in value.

Development of Imports.

The following table shows the total imports during the last decade:—

Year.	Value.		Value per Head.	
	Including Specie.	Excluding Specie.	Including Specie.	Excluding Specie.
	£	£	£ s. d.	£ s. d.
1910	17,051,583	16,748,223	17 3 6	16 17 5
1911	19,545,879	18,782,608	19 5 2	18 10 2
1912	20,976,574	20,576,579	20 3 9	19 16 1
1913	22,288,302	21,653,632	20 17 1	20 5 3
1914	21,856,096	21,144,227	20 0 11	19 7 10
1915	21,728,834	20,658,720	19 15 2	18 15 10
1916	26,339,283	25,045,403	23 19 2	22 15 7
1917	20,919,265	20,742,130	19 0 8	18 17 7
1918	24,234,007	24,131,792	21 19 5	21 17 7
1919	30,671,698	30,309,167	26 19 10	26 13 5

Main Groups of Imports.

The main groups of imports according to the classification followed in the "Statistics of the Dominion of New Zealand," Volume ii, are given below for the five years 1915–19.

Main Groups of Imports, 1915–19.

Group of Principal Articles imported.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Apparel (including hats and caps)	1,172,998	1,675,782	1,346,505	1,558,385	1,780,871
Boots and shoes ..	409,987	505,114	493,109	589,642	589,766
Drapery, haberdashery, linens, woollens, and other textiles	2,470,036	3,703,338	2,783,291	3,715,045	4,251,102
Hosiery	211,962	367,096	209,741	311,356	434,225
Silks	201,854	293,101	277,962	468,629	504,171
Totals ..	4,466,837	6,544,431	5,110,608	6,643,057	7,560,135
Iron and steel (pig, wrought, wire, &c., and galvanized)	1,206,655	1,313,584	681,546	613,709	1,762,945
Railway and tramway plant	288,536	94,842	44,007	52,214	270,900
Machinery	893,383	948,858	777,353	702,044	1,208,739
Sewing and knitting machines	47,013	50,789	62,946	65,782	72,256
Hardware and ironmongery	309,754	390,840	294,951	208,158	417,743
Tools and implements (including agricultural)	256,098	318,355	274,654	219,074	519,241
Nails	61,829	101,740	66,092	58,130	224,175
Other metals and metal manufactures	734,769	947,421	708,078	754,029	1,174,474
Totals ..	3,798,037	4,166,429	2,909,627	2,673,140	5,650,473
Sugar	1,069,096	986,766	1,136,722	904,957	1,114,084
Tea	455,240	386,316	428,912	415,244	423,293
Totals ..	1,524,336	1,373,082	1,565,634	1,320,201	1,537,377
Beer	53,668	44,775	17,535	10,920	6,495
Spirits*	405,628	743,510	528,797	868,645	467,766
Wine	83,817	85,183	73,336	68,908	1,013,888
Tobacco	533,876	717,822	446,308	690,924	112,546
Totals ..	1,076,989	1,591,290	1,065,976	1,639,397	1,600,695

* Includes methylated and perfumed spirits, and spirits of wine.

MAIN GROUPS OF IMPORTS, 1915–19—*continued.*

Group of Principal Articles imported.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Paper	386,996	590,530	485,300	472,050	672,474
Printed books ..	233,058	258,125	236,267	288,070	324,170
Stationery	198,590	269,308	207,789	210,047	302,764
Totals ..	818,644	1,117,963	929,356	970,167	1,299,408
Miscellaneous (specified articles)—					
Arms, ammunition, and explosives	173,140	149,267	163,140	156,017	228,475
Automobiles, motor-cars, and motor-cycles, and materials for	1,037,079	1,668,895	1,254,608	1,323,488	2,244,741
Bags and sacks ..	254,174	235,139	219,955	254,518	326,920
Bicycles and tricycles	11,900	21,895	11,755	14,695	14,255
Bicycle and tricycle fittings	96,369	105,431	80,204	90,192	104,658
Candles	37,440	36,009	9,064	26,237	20,288
Canvas	71,745	91,047	94,692	130,177	216,924
Carpeting and drug-geting	78,327	128,214	82,703	59,307	135,820
Carts, carriages, and materials for	68,525	47,273	41,573	40,214	67,318
Cement	5,667	1,374	788	527	2,219
China, porcelain, earthenware, and Parian ware	109,135	188,552	114,261	103,513	159,386
Coal	344,495	189,526	214,152	202,102	382,016
Drugs, chemicals, and druggists' wares	680,122	890,980	741,776	994,173	1,099,454
Fancy goods and toys	212,840	320,996	284,781	292,539	382,356
Fish, potted and preserved	87,736	92,821	104,819	133,321	121,599
Floorcloth and oil-cloth	81,079	101,337	54,482	29,540	66,266
Fruits (including fresh, preserved, bottled, and dried)	410,842	458,417	493,733	519,166	367,719
Furniture, cabinet-ware, and upholstery	31,152	41,012	32,072	75,417	21,264
Glass and glassware	181,873	218,664	134,256	134,921	227,815
Leather and leather manufactures	218,464	295,697	372,051	344,454	405,019
Manures	476,584	342,580	328,762	267,323	319,620
Musical instruments and materials for	124,025	157,188	116,062	99,692	127,528
Seeds	327,290	219,502	294,520	262,973	151,065
Oil	793,663	1,001,924	943,460	1,448,318	1,305,043

MAIN GROUPS OF IMPORTS, 1915-19—*continued.*

Group of Principal Articles imported.	1915.	1916.	1917.	1918.	1919.
Miscellaneous—*cont'd.*	£	£	£	£	£
Timber	305,685	166,817	160,914	152,525	174,666
Woolpacks and wool-pockets	82,798	101,909	113,926	119,955	198,909
Total miscellaneous (specified articles)	6,302,149	7,272,466	6,462,509	7,275,304	8,871,343
Other imports (excluding specie)	2,671,728	2,979,742	2,698,420	3,610,526	3,789,736
Total imports (excluding specie)	20,658,720	25,045,403	20,742,130	24,131,792	30,309,167
Specie imported ..	1,070,114	1,293,880	177,135	102,215	362,531
Total imports ..	21,728,834	26,339,283	*20,919,265	*24,234,007	30,671,698

* Excluding gold (specie and bullion).

Owing to the very varied nature of the import trade it is not possible to classify imports so completely as exports. There are two big groups of items, however, which are of dominating importance, and are, moreover, fairly homogeneous. The first, "Clothing and textiles," comprises practically all woven articles; but the second, "Metals and machinery," is not altogether complete, since there are many items in the "Miscellaneous" group which are metal manufactures. The other three groups are well defined, and the value imported in each is, on the whole, steady.

In the miscellaneous items the most noteworthy advance is that made by motor-cars and accessories; whereas prior to 1911 their value never exceeded £300,000 per annum, two years later it rose to over a million, and in 1919 amounted to £2,244,741.

The grand total of £30,671,698 shown for 1919 (over £6,400,000 more than in 1918) is very satisfactory, but it must be remembered that most if not all of this increase was attributable to higher prices ruling.

IMPORTS BY PORTS.

The subjoined table exhibits the value of the imports received at each port in New Zealand during 1919, together with average annual values for the four preceding quinquennial periods. The general increase in the value of imports in 1919 as compared with the previous year is very evenly distributed over the various parts of the Dominion.

It will be observed that the number of ports participating in the direct importing trade of the Dominion is large. The four chief ports are far in advance of the rest, and amongst them the North shows a more rapid progress, so that now Lyttelton and Dunedin combined do not receive so much as either Wellington or Auckland.

The imports credited to each port consist of the goods actually landed over the wharf at that port, not, as in the case of exports, of the goods credited to the district in which they are produced. The figures given in the following table therefore represent the actual shipping import trade of each port, though from the central ports the goods are afterwards distributed over the country either by rail or by coastal shipping:—

IMPORTS BY PORTS.

Port.	Yearly Average of Quinquennial Periods.				1918
	1897–1901.	1902–6.	1907–11.	1912–16.	
	£	£	£	£	£
Wellington ..	2,353,678	3,897,314	4,979,747	6,881,216	10,626,873
Auckland ..	2,434,444	3,250,124	4,786,242	6,683,080	9,567,409
Lyttelton ..	1,600,056	2,154,373	2,670,757	3,418,749	4,584,822
Dunedin ..	1,914,319	2,112,128	2,467,786	2,783,086	3,331,655
Napier ..	201,157	261,940	417,597	570,557	575,493
Invercargill ..	251,633	349,532	501,344	577,029	527,475
Timaru ..	133,732	196,022	303,622	376,691	353,868
Wanganui ..	123,017	167,188	233,082	281,545	317,007
New Plymouth	60,939	89,975	132,056	192,901	230,089
Gisborne ..	40,054	70,519	143,521	201,660	165,390
Nelson ..	133,467	133,812	126,836	147,835	110,014
Greymouth ..	52,640	74,203	108,370	101,552	77,616
Oamaru ..	45,251	59,896	68,750	89,783	56,630
Patea ..	14,037	20,411	27,520	30,072	52,952
Wairau (including Picton)	14,016	25,028	38,297	54,825	43,763
Westport ..	28,815	34,562	53,801	43,718	35,867
Kaipara ..	5,419	6,002	10,188	5,509	5,955
Hokitika ..	14,696	13,989	17,126	10,768	5,846
Tauranga ..	3,146	2,704	3,628	5,494	2,974
Parcels-post ..	73,377	169,748	318,995	*	*
Totals ..	9,497,893	13,089,470	17,409,265	22,637,817	30,671,698

* Parcels-post now included under the headings of the various ports.

IMPORT AND CONSUMPTION OF CERTAIN ARTICLES OF FOOD AND DRINK.

Information as to the amount of certain principal articles of food and drink entered for home consumption on importation and ex warehouse is given in the tables which follow. The figures shown for beer include also beer manufactured in the Dominion on which excise duty was paid. In all other cases the articles specified are not produced (in the raw) in the Dominion, or, if so, only in very small quantities, so that the figures shown in the second of the tables practically represent the *per capita* consumption of the various commodities. Coffee-essence, of which £4.305 worth was entered for home consumption in 1919, is not included in the figures given for coffee.

TOTAL AMOUNTS ENTERED FOR HOME CONSUMPTION.

Article.	Unit of Quantity.	1915.	1916.	1917.	1918.	1919.
Tea	lb.	9,148,578	7,977,963	8,793,057	9,403,207	8,648,653
Coffee, raw and roasted	"	343,501	375,408	365,351	539,591	237,348
Cocoa and chocolate*	"	774,880	685,639	235,213	554,585	978,961
Cocoa-beans ..	"	574,965	1,124,373	1,011,811	978,090	1,271,292
Rice.. ..	"	9,171,232	8,042,944	10,261,328	8,235,696	4,899,888
Sago and tapioca	"	2,715,104	2,928,800	3,558,016	3,065,888	731,362
Currants, dried	"	2,455,674	1,571,232	1,808,475	1,177,500	1,200,704
Raisins ..	"	6,535,863	6,253,293	5,479,282	6,361,968	3,161,926
Figs, dates, and prunes	"	3,851,558	2,758,546	2,415,312	1,610,799	277,943
Sugar ..	Cwt.	1,333,649	1,246,457	1,368,056	1,041,537	1,159,403
Salt	"	437,620	637,160	319,820	843,600	308,360
Spices ..	lb.	705,530	717,584	892,798	780,335	426,440
Mustard ..	"	236,618	332,365	154,640	177,007	153,413
Tobacco ..	"	3,173,152	3,075,756	3,104,810	3,111,037	3,765,672
Beer.. ..	Gal.	10,865,764	11,477,046	11,416,475	10,621,229	18,882,286
Wine ..	"	163,248	138,806	142,893	126,138	174,424
Spirits ..	"	932,547	769,964	750,729	568,868	708,991

AMOUNTS PER HEAD (INCLUDING MAORIS) ENTERED FOR HOME CONSUMPTION.

Article.	Unit of Quantity.	1915.	1916.	1917.	1918.	1919.	Average of Five Years.
Tea	lb.	7·96	6·94	7·65	8·16	7·29	7·60
Coffee, raw and roasted	"	0·30	0·33	0·32	0·47	0·20	0·32
Cocoa and chocolate*	"	0·67	0·60	0·20	0·48	0·83	0·56
Cocoa-beans ..	"	0·50	0·98	0·88	0·85	1·07	0·86
Rice	"	6·98	7·00	8·93	7·14	4·13	7·02
Sago and tapioca ..	"	2·36	2·55	3·10	2·66	0·62	2·25
Currants, dried ..	"	2·14	1·37	1·57	1·02	1·01	1·42
Raisins	"	5·69	5·44	4·77	5·52	2·67	4·80
Figs, dates, and prunes	"	3·35	2·40	2·10	1·40	0·24	1·88
Sugar	"	129·92	120·96	133·48	101·19	109·47	119·02
Salt	"	42·56	61·60	31·36	81·96	29·12	49·29
Spices	"	0·61	0·62	0·78	0·68	0·36	0·61
Mustard	"	0·21	0·29	0·13	0·15	0·13	0·18
Tobacco	"	2·76	2·68	2·70	2·70	3·17	2·81
Beer	Gal.	9·46	9·99	9·94	9·21	15·92	10·09
Wine	"	0·14	0·12	0·12	0·11	0·14	0·13
Spirits	"	0·81	0·67	0·65	0·49	0·59	0·64

* Not including chocolate confectionery.

Whilst the average consumption of the main items of food and drink is naturally very steady from year to year, not a single item shows an uninterrupted increase.

IMPORTS BY CLASSES.

In 1914 the statistics, both of imports and exports, were collected for the first time upon a new plan, a statistical classification being adopted which assembles the items in well-defined classes, based largely on the

recommendations of the Dominions Royal Commission which toured New Zealand in 1913, and conforming closely to the scheme adopted in Australia.

Direction of Import Trade.

The import trade of the Dominion, though spread over more countries than the export trade, is yet confined mainly to the United Kingdom, Australia, and the United States. In the days of the first settlement Australia was the source from which the young colony drew most of its supplies, and for a long period imports from Australia overshadowed imports from the United Kingdom. The proportion of imports from Australia, however, tended to decrease steadily till from 60 per cent. in 1862 it had fallen to about 15 per cent. In 1918, however, imports from Australia were nearly 22 per cent. of the total imports.

Most of the goods brought to New Zealand from overseas come from the United Kingdom, which in normal times supplies about 60 per cent. of the total imports. The proportion has fallen a good deal of recent years—in the "eighties" and "nineties" the figure was, on the average, nearer 70 per cent. than 60 per cent.

The cause of this decline is to be found in the development of trade with other countries in quite recent years, particularly with Germany, the United States, Japan, and in a less degree with France, Belgium, Holland, and other European countries. The United States was sending goods to New Zealand practically from the foundation of the colony, and the share of the imports received from that country steadily increased, till in the first decade of the present century it was 11 or 12 per cent. The adoption of Imperial preference seems to have caused a temporary drop in the figure to about 7 per cent., though the proportion has now for some years been steadily climbing again, and has indeed actually surpassed its old level. In 1918 more than 20 per cent. of the imports came from the United States. Trade with Germany developed steadily during the decade preceding the outbreak of war.

India captured the New Zealand jute-market in the early "eighties," and since then there has been a regular import of corn-sacks, woolpacks, &c. In former times the colony imported its sugar from Mauritius, but after 1890 Fiji supplanted Mauritius, so that the imports from the Pacific islands are swelled to 4 per cent., while Mauritius practically disappears from the list of countries. Similarly the import of tea from China gave way about the same time to imports from Ceylon.

The present position is illustrated by the tables which follow. It will be seen that, while imports of goods from Germany have practically ceased, and imports from the United Kingdom are less than in any year except 1917, since 1905 the remaining six countries, with the exception of Fiji, have maintained a high level. The figures for India, United States, and Canada are the highest ever recorded.

The figures relate to countries of shipment.

IMPORTS FROM PRINCIPAL COUNTRIES, 1910–1919.

Year.	United Kingdom.	Australia.	Canada.	India.	Ceylon.	Fiji.	United States.	Germany
	£	£	£	£	£	£	£	£
1910..	10,498,771	2,359,393	261,402	399,991	248,476	580,084	1,399,737	391,795
1911..	11,787,300	2,944,991	283,410	326,360	275,672	728,806	1,682,129	480,617
1912..	12,499,787	2,583,887	394,249	395,298	289,008	764,790	2,049,618	653,230
1913..	13,312,193	2,914,848	452,519	421,209	275,350	846,493	2,107,990	687,935
1914..	11,985,946	3,376,371	479,140	486,978	394,444	738,751	2,282,966	620,400
1915..	11,141,067	3,554,535	797,816	527,942	408,697	1,128,959	2,600,248	7,790
1916..	13,869,455	4,002,171	757,286	572,257	366,753	1,053,754	3,909,925	4,287
1917..	8,817,519	3,660,931	757,041	612,063	353,613	1,203,372	3,900,658	733
1918..	8,977,725	5,133,412	930,964	712,033	319,498	939,341	4,980,748	393
1919..	11,839,430	5,081,908	1,022,234	772,838	383,209	980,186	7,576,314	23

In the exports subsection of this book it has been shown that New Zealand is a primary-producing country—*i.e.*, her exports consist principally of raw materials. It was also pointed out that the largest proportion of imports was of manufactures. The following table, grouped in the same manner as the export table referred to, illustrates this statement. This table differs from that which precedes it in that the figures given refer to countries of origin.

Countries.	Food, Drink, and Tobacco.	Raw Materials and Articles mainly unmanufactured.	Articles wholly or mainly manufactured.	Miscellaneous and Unclassified.	Bullion and Specie.*	Total.*
	£	£	£	£	£	£
United Kingdom ..	1,095,401	157,408	9,812,225	108,274	350,345	11,523,653
British Possessions.						
Europe—						
Gibraltar	..	..	24	..	..	24
Malta	..	..	732	..	..	732
Asia—						
Burma	7,761	..	41,421	..	..	49,182
Ceylon	383,397	200	4,651	180	..	388,428
India..	43,870	12,016	730,298	1,485	..	787,669
Other Asiatic possessions	23,488	3,427	1,997	..	..	28,912
Africa—						
South African Union ..	42,779	27,868	98,441	134	..	169,222
Other African possessions	2,098	..	49	..	..	2,147
America—						
Canada	174,176	41,755	1,432,461	1,158	..	1,649,550
OtherAmerican possess'ns	12,337	4	6,307	..	..	18,648
Pacific Islands—						
Australia	1,234,246	559,379	2,075,308	33,708	13,467	3,916,108
Fiji	976,489	655	175	..	..	977,319
Other Pacific islands ..	1,382	961	1,258	4,424	..	8,025
Foreign Countries and Possessions.						
Europe—						
Denmark	53,166	..	9,611	2,753	..	65,530
France	51,815	3,707	353,184	2,656	..	411,362
Italy	12,641	409	123,917	620	..	137,587
Netherlands	24,121	..	25,285	674	..	50,080
Sweden	26,189	3,306	83,266	911	..	113,672
Switzerland	149	..	205,805	1,133	..	207,087
Other European countries	17,955	18,213	20,878	..	..	57,046

*Excluding gold.

Countries.	Food, Drink, and Tobacco.	Raw Materials and Articles mainly unmanufactured.	Articles wholly or mainly manufactured.	Miscellaneous and Unclassified.	Bullion and Specie.*	Total.*
Foreign Countries and Possessions—contd.						
Asia—	£	£	£	£	£	£
China	63,184	1,354	62,837	185	..	127,560
Japan	17,676	32,138	1,262,335	1,056	..	1,313,205
Java	227,231	15,879	5,055	..	..	248,165
Philippine Islands ..	6,283	27,639	796	..	..	34,718
Sumatra	98	..	97,112	..	..	97,210
Other Asiatic countries	10,540	117	14,355	..	..	25,012
Africa—						
Egypt	1,117	..	54,127	..	..	55,244
Other African countries	3,857	81	1,291	12	..	5,241
America—						
United States of America	613,187	159,565	7,213,021	67,351	3	8,053,127
Other American countries	15,013	2,574	10,426	50	..	28,063
Pacific Islands—						
German Samoa ..	22,530	215	163	90	..	22,998
New Caledonia ..	..	5	17,435	..	..	17,440
Tuamotu Archipelago ..	..	..	65,209	..	..	65,209
Other Pacific islands ..	8,908	4,684	2,931	..	..	16,523
Totals	5,173,084	1,073,559	23,834,386	226,854	363,815	30,671,698

* Excluding specie.

Imports from Cook Islands.

A small group of Pacific islands was annexed to the Dominion on the 11th June, 1901, and has since been administered as the "Cook and other annexed islands." The following table shows the growth of the import trade from this group—previous figures are included with those for the other Pacific islands:—

Year.	Imports.	Year.	Imports.
	£		£
1902	32,163	1911	92,382
1903	38,708	1912	105,943
1904	45,517	1913	109,195
1905	44,179	1914	94,620
1906	63,477	1915	87,890
1907	61,922	1916	63,702
1908	67,483	1917	72,470
1909	73,469	1918	70,374
1910	90,039	1919	88,820

Imports from German Samoa.

A similar table shows the increase in the value of imports of produce of German Samoa since those Islands were occupied by New Zealand.

Year.	Imports.	Year.	Imports.
	£		£
1914	5,548	1917	15,465
1915	3,326	1918	20,359
1916	18,604	1919	22,998

SECTION XI.—COMMERCE—*continued.*

SUBSECTION D.—TARIFF AND REVENUE.

Customs Revenue.

In the earlier years of New Zealand's history the amount derived from Customs and excise duties produced a greater proportion of the revenue than it does to-day. There has been a constant tendency for this proportion to decrease, and the table given below will show that, even in the last twenty years, this tendency has been very noticeable.

Amount of Customs and Excise Revenue, expressed as a Percentage of the Total Taxation and Total Revenue of New Zealand.

Year ended 31st March.	Total Revenue.	Total Taxation.	Customs and Excise Duties.		
			Amount.	Percentage of Total Revenue.	Percentage of Total Taxation.
	£	£	£	Per Cent.	Per Cent.
1900	5,699,618	2,891,126	2,187,859	38·39	75·67
1901	5,906,916	3,042,890	2,266,032	38·36	74·47
1902	6,152,839	3,113,079	2,291,349	37·24	73·61
1903	6,447,435	3,277,964	2,426,043	37·63	74·01
1904	7,130,117	3,649,601	2,698,046	37·84	73·93
1905	7,347,197	3,754,379	2,728,193	37·13	72·67
1906	7,650,098	3,841,596	2,795,546	36·54	72·77
1907	8,478,957	4,264,555	3,048,622	35·96	71·49
1908	9,063,989	4,645,754	3,217,538	35·50	69·26
1909	9,001,185	4,377,761	2,917,462	32·41	66·64
1910	9,238,917	4,180,516	2,786,490	30·16	65·63
1911	10,297,273	4,837,322	3,145,929	30·55	65·03
1912	11,061,161	5,296,590	3,398,143	30·72	64·16
1913	11,734,276	5,606,829	3,531,761	30·10	62·99
1914	12,229,661	5,918,034	3,553,785	29·06	60·05
1915	12,451,945	5,880,811	3,294,943	26·46	56·03
1916	14,507,530	7,266,966	3,524,063	24·29	48·49
1917	18,355,194	10,549,654	4,037,628	22·00	38·27
1918	20,206,222	12,340,853	3,601,383	17·82	29·18
1919	22,352,372	13,801,643	4,104,749	18·37	29·74
1920	26,081,340	16,251,769	5,185,388	19·08	31·91

Though the Customs revenue has increased greatly, the table shows that other forms of taxation and other sources of revenue have increased still faster, so that the tendency is for the proportion of taxation and of revenue furnished by the Customs duties constantly to decrease. This relative decrease has been due in part to the extension of the governmental services in the Dominion increasing the revenue apart from taxation, to the greater use of direct taxation, and to the remissions and reductions of duty which

have been made from time to time. These reductions have been mainly in foodstuffs, so that the tariff has tended towards the ideal of a free breakfast-table. War conditions necessitated in 1917 a partial reversal of this principle whereby non-alcoholic beverages again became the subject of taxation.

The tables hereunder show the amounts and percentages collected at intervals of five years, 1891–1911, and in each year since 1911, in respect of (1) foods and non-alcoholic drinks, (2) clothing and textiles, (3) alcoholic drinks and tobacco, and (4) all other articles. Excise duties on alcoholic liquors, tobacco, &c., are not included.

PRINCIPAL CLASSES OF IMPORTS FROM WHICH CUSTOMS REVENUE DERIVED.

Year.	Amount of Duty derived from				Total.
	Foods and Non-alcoholic Drinks.	Clothing and Textiles.	Alcoholic Drinks and Tobacco.	All other Articles.	
	£	£	£	£	£
1891	312,809	276,072	651,680	320,141	1,560,702
1896	329,622	322,947	715,019	400,264	1,767,852
1901	321,625	434,112	928,176	512,853	2,196,766
1906	369,964	610,873	1,130,837	787,429	2,899,103
1911	147,456	682,710	1,286,601	1,048,890	3,165,657
1912	158,077	708,853	1,395,837	1,072,952	3,335;719
1913	146,938	790,862	1,408,977	1,078,649	3,425,426
1914	165,998	822,373	1,459,464	906,780	3,354,615
1915	155,292	727,869	1,515,903	745,264	3,144,328
1916	170,009	985,335	1,390,322	1,036,227	3,581,893
1917	174,430	794,443	1,397,267	805,400	3,171,540
1918	278,939	935,203	1,342,443	801,953	3,358;538
1919	248,762	1,097,463	1,629,680	1,245,157	4,221,062

PERCENTAGE OF EACH CLASS TO THE TOTAL DUTY COLLECTED.

Year.	Percentage of Total Duty collected on			
	Foods and Non-alcoholic Drinks.	Clothing and Textiles.	Alcoholic Drinks and Tobacco.	All other Articles.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1891	20·05	17·69	41·75	20·51
1896	18·64	18·27	40·45	22·64
1901	14·64	19·76	42·25	23·35
1906	12·76	21·07	39·01	27·16
1911	4·66	21·57	40·64	33·13
1912	4·74	21·25	41·84	32·17
1913	4·29	23·09	41·13	31·49
1914	4·95	24·51	43·51	27·03
1915	4·94	23·15	48·21	23·70
1916	4·75	27·51	38·81	28·93
1917	5·50	25·05	44·06	25·39
1918	8·31	27·84	39·97	23·88
1919	5·89	26·00	38·61	29·50

The Customs and excise duties received during the last five years are shown in detail in the table given below, which also shows the rate of revenue per head of mean population, inclusive and exclusive of Maoris, for each year considered.

CUSTOMS AND EXCISE REVENUE, 1915–19.

—	1915.	1916.	1917.	1918.	1919.
Customs Duties.	£	£	£	£	£
Spirits	762,694	665,182	659,477	522,401	622,811
Wine	42,258	34,950	35,812	31,698	38,839
Ale, beer, &c.	26,005	22,932	8,063	3,237	2,997
Cigars, cigarettes, and snuff	258,494	262,695	287,777	369,817	472,256
Tobacco	423,435	401,598	403,591	413,226	490,483
Coffee, cocoa, &c.	10,214	9,062	3,261	8,012	12,930
Tea	574	623	36,651	129,145	116,432
Opium	22	17	21	29	19
Other goods by weight ..	190,121	195,351	141,089	144,356	149,412
„ *ad valorem* ..	1,315,611	1,854,262	1,498,805	1,613,908	2,215,101
Other duties	114,901	135,221	96,993	122,709	99,782
Primage	46,576	241,118	196,863	227,626	281,292
Surtax	*22	..	..	..	..
Totals, Customs duties	3,190,883	3,823,011	3,368,403	3,586,164	4,502,354
Excise Duties.					
Tinctures—New Zealand ..	7,815	8,557	9,892	12,078	11,495
Cigars, cigarettes, and snuff —New-Zealand-manufactured	331	399	543	866	14,667
Tobacco — New-Zealand-manufactured	583	1,452	3,478	1,745	1,578
Beer—New Zealand ..	137,225	189,671	219,594	261,536	337,811
Totals, excise duties ..	145,954	200,079	233,507	276,225	365,551
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Revenue from Customs duties per head of mean population (excluding Maoris)	2 18 1	3 9 6	3 1 4	3 5 0	3 19 3
Ditto (including Maoris) ..	2 15 6	3 6 6	2 18 8	3 2 3	3 15 11
Revenue from excise duties per head of mean population (excluding Maoris)	0 2 7·9	0 3 7·7	0 4 2·9	0 5 0·1	0 6 5·2
Ditto (including Maoris) ..	0 2 6·5	0 3 5·8	0 4 0·8	0 4 9 5	0 6 1·9

* Minus quantity.

The increasing Customs revenue shown in the pre-war years suffered a check in 1914, followed by further diminution in 1915. Since then the tendency has been a fluctuating one, owing to the modifications in the tariff, but with a general tendency to rise.

It may here be remarked that a revision of the Customs tariff in 1921 is in contemplation. A departmental Commission has been constituted to make inquiries and receive suggestions, with a view to laying definite proposals before Parliament.

The following table furnishes a general view of the ratio of Customs revenue to imports since 1895, which is taken as the base year:—

CUSTOMS REVENUE COMPARED WITH IMPORT VALUES FROM 1895.

Year.	Imports.		Revenue.			Percentage of Revenue on Total Imports.	Index Numbers of Customs Revenue compared with Imports.
	Value.	Value per Head.	Amount.	Actual Value per Head.	Value per Head at 1895 Ratio.		
	£	£ s. d.	£	£ s. d.	£ s. d.	Per Cent.	
1895 ..	6,400,129	9 4 10	1,619,970	2 6 9	2 6 9	25·31	1000
1896 ..	7,137,320	10 1 11	1,765,073	2 9 11	2 11 1	24·73	977
1897 ..	8,055,223	11 3 3	1,912,161	2 13 0	2 16 6	23·74	938
1898 ..	8,230,600	11 3 7	1,961,726	2 13 3	2 16 7	23·83	942
1899 ..	8,739,633	11 13 1	2,042,002	2 14 5	2 19 0	23·36	923
1900 ..	10,646,096	13 18 10	2,170,354	2 16 10	3 6 4	20·39	805
1901 ..	11,817,915	15 3 10	2,191,798	2 16 4	3 16 11	18·55	733
1902 ..	11,326,723	14 3 11	2,285,043	2 17 3	3 11 10	20·17	797
1903 ..	12,788,675	15 11 10	2,501,896	3 1 0	3 18 11	19·56	773
1904 ..	13,291,694	15 14 7	2,650,139	3 2 9	3 19 8	19·94	788
1905 ..	12,828,857	14 14 11	2,652,666	3 1 0	3 14 8	20·68	817
1906 ..	15,211,403	16 19 8	2,899,103	3 4 9	4 6 0	19·06	753
1907 ..	17,302,861	18 16 6	3,079,422	3 7 0	4 15 4	17·80	703
1908 ..	17,471,284	18 9 9	2,903,086	3 1 5	4 13 7	16·62	656
1909 ..	15,674,719	16 2 7	2,653,617	2 14 7	4 1 8	16·93	669
1910 ..	17,051,583	17 3 6	2,954,989	2 19 6	4 6 11	17·33	685
1911 ..	19,545,879	19 5 2	3,165,657	3 2 5	4 9 2	16·20	640
1912 ..	20,976,574	20 3 9	3,335,719	3 4 3	5 2 2	15·90	628
1913 ..	22,288,302	20 17 1	3,425,426	3 4 1	5 5 7	15·37	607
1914 ..	21,856,096	20 0 11	3,354,616	3 1 6	5 1 6	15·35	606
1915 ..	21,728,834	19 15 2	3,190,883	2 18 1	5 0 1	14·68	580
1916 ..	26,339,283	23 19 2	3,823,011	3 9 6	6 1 4	14·51	573
1917 ..	20,919,265	19 0 8	3,368,403	3 1 3	4 16 4	16·10	636
1918 ..	24,234,007	21 19 5	3,586,104	3 5 0	5 11 2	14·79	584
1919 ..	30,671,698	26 18 11	4,502,354	3 19 3	6 14 8	14·06	556

With regard to the above table, it may be explained that the figures given in the column "Value per head at 1895 ratio" indicate the amount of revenue per head of population which would have been obtained had the same high ratio of Customs taxation been levied as prevailed in 1895. The last two columns in the table show clearly the substantial decline in the proportion which the Customs revenue bears to the value of the imports.

With slight interruptions in 1902, 1905, 1909, 1910, 1914, 1915, and 1917 the imports increased annually in both total and *per capita* values, until in 1919 the total was not very far short of five times as much as that of 1895.

In the same period the Customs revenue has nearly trebled, whilst the advance in population was just over 62 per cent. It is plain, therefore, that the Customs taxation per head has been increasing steadily in sym-

pathy with the greater imports, and in spite of a steady movement towards diminishing the relative duty payable.

In 1895 the proportion of revenue to the total imports was one-fourth; in 1919 it had fallen to less than one-seventh. The tariff of 1903 and the further changes made in 1907, together with the financial circumstances of 1908, may account for such interruptions as are noticeable in this generally steady diminution. As will be seen later in this subsection, duty-free goods are, in recent years, being imported more rapidly than those on which duty is levied.

CUSTOMS REVENUE BY CLASSES OF IMPORTS, 1919.

Class.	Items.	Articles.	Revenue collected.		
			General.	Additional Preferential.	Total.
			£	£	£
I	1–41	Foodstuffs of animal origin (excluding live animals)	41,033	2,419	43,452
II	42–137	Foodstuffs of vegetable origin, and common salt	70,095	4,343	74,438
III	138–150	Beverages (non-alcoholic) and substances used in making up the same	122,069	8,803	130,872
IV	151–167	Spirits and alcoholic liquors ..	666,867	74	666,941
V	168–173	Tobacco and preparations thereof ..	962,739	..	962,739
VI	174–186	Live animals	38	..	38
VII	187–207	Animal substances (mainly unmanufactured), not being foodstuffs	954	29	983
VIII	208–233	Vegetable substances and non-manufactured fibres	6,485	1,925	8,410
IXA	234–262	Apparel	633,932	91,482	725,414
IXB	263–291	Textiles	309,656	62,393	372,049
IXC	292–309	Manufactured fibres	27,356	7,149	34,505
X	310–344	Oils, fats, and waxes	52,284	7,849	60,133
XI	345–355	Paints and varnishes	13,426	1,642	15,068
XII	356–372	Stones and minerals used industrially	3,141	23	3,164
XIII	373–375	Specie	..	..	..
XIVA	376–405	Metal, unmanufactured, partially manufactured, and ores	..	861	861
XIVB	406–495	Metal manufactures, other than machines and machinery	180,981	47,450	228,431
XV	496–572	Machines and machinery	85,102	43,195	128,297
XVIA	573–576	Indiarubber and manufactures thereof (not including tires)	53	1,101	1,154
XVIB	577–603	Leather and manufactures thereof (including substitutes)	15,001	4,200	19,201
XVIIA	604–641	Timber	6,243	..	6,243
XVIIB	642–661	Wood, cane, and wicker manufactures	16,089	2,692	18,781
XVIII	662–683	Earthenware, china, glass, stoneware, cements, and cement materials	36,253	7,638	43,891
XIXA	684–696	Paper	10,103	12,623	22,726
XIXB	697–711	Stationery	48,338	8,019	56,357
XX	712–722	Jewellery, timepieces, and fancy goods	96,972	20,221	117,193
XXI	723–734	Optical, surgical, and scientific instruments	2,097	3,535	5,632
XXIIA	735–791	Drugs, chemicals, and druggists' wares	94,989	15,970	110,959
XXIIB	792–810	Manures	..	..	..
XXIII	811–903	Miscellaneous	242,820	120,310	363,130
		Totals	3,745,116	475,946	4,221,062

Rather less than one-sixth of the Customs revenue collected during 1919 was furnished by spirits and alcoholic liquors (£666,941). Although up to and

including 1917 this class has furnished more of the Customs revenue than any other item, it has been surpassed in 1918 and 1919 by both tobacco and apparel.

Two classes (manures and specie) are entirely duty-free, and a good number contribute very little to the revenue. The additional surtax on foreign goods by which New Zealand extends preference to British imports produces most revenue from the items comprised in Classes IXA, IXB, XIVB, and XV, and the miscellaneous class. The total surtax, however, compared with the revenue derived from the general tariff, does not amount to a very large sum, and in 1919 was less than 13 per cent. of the total duties.

Excise Duties.

The main item from which excise revenue is derived is beer, which, however, pays only a few pence per gallon, as against the import duty of 2s. per gallon, so that the quantity of beer brewed in New Zealand is very much greater than the quantity imported. There are, besides, small but growing manufactures of tinctures and of tobacco which yield a certain amount of excise revenue. The following table shows the amounts of duty collected in respect of these manufactures during the past five years :—

Excise Duties, 1915–19.

Item.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Beer	137,225	189,671	219,594	261,536	337,811
Culinary and flavouring essences, spirituous	3,402	4,167	4,096	4,552	4,180
Medicinal preparations over 50 per cent. proof spirit	3,097	2,915	3,181	4,907	4,101
Perfumed spirits	1,117	1,439	2,430	2,331	2,489
Toilet preparations	..	..	..	..	..
" spirituous ..	199	36	185	258	725
Cigarettes made by hand	..	..	..	..	..
" manufactured by machinery	..	..	..	..	13,519
Cigars and snuff	331	399	543	866	1,148
Tobacco, manufactured	583	1,452	3,478	1,745	1,578
Totals	145,954	200,079	233,507	276,225	365,551

Free and Dutiable Imports.

The next table gives the imports of free and dutiable goods arranged according to the statistical classification. Dutiable goods that are subject to preferential duty are also distinguished from those that are not so subject. The main features of the table are the overwhelming proportion of dutiable goods in the classes containing beverages (especially alcoholic) and tobacco, and the high proportion of free goods in stones and minerals (mainly coal), specie, and manures.

IMPORTS BY CLASSES, AND THE NATURE OF DUTY PAYABLE, 1919.

Class.	Items.	Articles.	Value Imported.				
			Free Goods.	Dutiable Goods.			Total Goods.
				Subject to Preferential Duty.	Not subject to Preferential Duty.	Total Dutiable.	
			£	£	£	£	£
I	1-41	Foodstuffs of animal origin (excluding live animals) ..	93,580	30,790	230,562	261,352	354,932
II	42-137	Foodstuffs of vegetable origin, and common salt ..	2,115,215	69,612	395,212	464,824	2,580,039
III	138-150	Beverages (non-alcoholic) and substances used in making up the same	80,493	72,209	484,716	556,925	637,418
IV	151-167	Spirits and alcoholic liquors	272	1,135	585,400	586,535	586,807
V	168-173	Tobacco and preparations thereof	..	..	1,013,888	1,013,888	1,013,888
VI	174-186	Live animals	3,022	..	10,686	10,686	13,708
VII	187-207	Animal substances (mainly unmanufactured), not being foodstuffs	29,964	1,563	6,447	8,010	37,974
VIII	208-233	Vegetable substances and non-manufactured fibres ..	342,692	19,750	28,502	48,261	390,953
IXA	234-262	Apparel	570,726	780,300	1,907,850	2,688,150	3,258,876
IXB	263-291	Textiles	3,136,100	586,675	1,003,818	1,590,493	4,726,593
IXC	292-309	Manufactured fibres	625,900	41,614	128,517	170,131	796,031
X	310-344	Oils, fats, and waxes	1,101,125	188,414	114,254	302,668	1,403,793
XI	345-355	Paints and varnishes	37,473	78,040	171,376	249,425	286,898
XII	356-372	Stones and minerals used industrially	397,581	158	12,413	12,571	410,152
XIII	373-375	Specie	362,531	..	..	..	362,531
XIVA	376-405	Metal, unmanufactured, partially manufactured, and ores	241,423	4,498	..	4,498	245,921
XIVB	406-495	Metal manufactures, other than machines and machinery	2,284,879	597,018	872,315	1,469,333	3,754,212
XV	496-572	Machines and machinery	790,847	430,140	296,485	735,625	1,526,472
XVIA	573-576	Indiarubber and manufactures thereof (not including tires)	49,276	5,387	250	5,637	54,913
XVIB	577-603	Leather and manufactures thereof (including substitutes)	211,599	41,527	177,835	219,362	430,961
XVIIA	604-641	Timber	75,976	..	98,690	98,690	174,666
XVIIB	642-661	Wood, cane, and wicker manufactures	54,560	26,756	50,899	77,655	132,215
XVIII	662-683	Earthenware, china, glass, stoneware, cements, and cement materials	207,256	75,617	106,547	182,164	389,420
XIXA	684-696	Paper	665,901	72,435	52,455	124,890	790,791
XIXB	697-711	Stationery	382,792	84,813	146,502	231,315	614,107
XX	712-722	Jewellery, timepieces, and fancy goods	200,904	201,254	281,297	485,551	686,455
XXI	723-734	Optical, surgical, and scientific instruments	290,101	36,833	3,883	40,716	330,817
XXIIA	735-791	Drugs, chemicals, and druggists' wares	634,689	153,438	311,327	464,765	1,099,454
XXIIB	792-810	Manures	319,620	..	..	..	319,620
XXIII	811-903	Miscellaneous	1,367,689	1,185,255	717,137	1,902,392	3,270,081
		Totals	16,665,186	4,794,249	9,212,263	14,006,512	30,671,698

By classifying the different rates of duty as is done in the following table it will be found that, even if specie is excluded, on the average rather over half the imports into New Zealand are duty-free, while the value of goods which are liable to specific duties is about one-seventh. The 15-per-cent. figures are composed mainly of the imports of boots, while the 30-per-cent. figures consist of the value of goods which are liable to 20 per cent. general duty plus an additional preferential duty of 10 per cent.

IMPORTS CLASSIFIED ACCORDING TO RATE OF DUTY, 1915–19.

Rate of Duty.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Free (excluding specie) ..	11,819,569	12,789,639	11,301,527	13,272,262	16,302,655
Specific duties ..	3,007,981	3,742,150	2,995,395	4,236,439	4,256,337
Ad valorem duties—					
5 per cent.	58,321	57,683	28,524	29,255	81,422
10 per cent. ..	321,028	583,390	387,617	353,161	751,249
14⅔ per cent. ..	..	4	..	..	..
15 per cent. ..	316,684	303,043	282,475	350,902	599,545
19⅔ per cent. ..	81	173	271	516	919
20 per cent. ..	3,035,260	4,713,363	3,042,690	2,672,950	4,167,888
22½ per cent. ..	41,291	69,854	60,137	85,123	154,313
24 per cent. ..	63,240	51,875	9,883	21,628	31,187
24½ per cent. ..	52	269	173	50	348
25 per cent. ..	1,730,835	2,262,780	1,478,009	1,561,640	1,808,429
30 per cent. ..	459,082	649,149	1,062,883	1,412,273	1,792,690
33⅓ per cent. ..	3,958	7,772	12,787	8,630	8,726
37½ per cent. ..	93,102	135,303	380,824	515,354	703,783
40 per cent. ..	4,119	3,862	2,788	2,292	3,404
60 per cent. ..	..	..	62	104	428
Totals *ad valorem* ..	6,116,044	8,838,520	6,758,113	7,013,873	10,099,331
Specie	1,070,114	1,293,880	177,135	102,215	362,531
Grand totals ..	21,728,834	26,339,283	20,919,265	24,234,007	30,671,698

The value of boots imported is included under both specific and *ad valorem* duties: 1915, £295,883; 1916, £324,906; 1917, £312,905; 1918, £390,782; 1919, £349,156.

As already stated, general tariff revisions were made in 1895 and 1907. The table following shows for the years immediately preceding and following these changes, and for 1919, the value of free and dutiable imports, the percentage admitted free of duty, and the duty per cent. on dutiable imports and on all merchandise imported:—

	1894.	1896.	1906.	1908.	1919.
Merchandise—	£	£	£	£	£
Free	1,871,772	2,263,091	5,476,949	8,658,111	16,302,655
Dutiable	4,118,405	4,772,288	8,826,221	8,589,051	14,006,512
Imports (less specie) ..	5,990,177	7,035,379	14,303,170	17,247,162	30,309,167
Percentage of free merchandise	Per Cent. 31·25	Per Cent. 32·17	Per Cent. 38·29	Per Cent. 50·20	Per Cent. 53·79
	£	£	£	£	£
Total net duty received*	1,572,467	1,767,852	2,903,131	2,907,151	4,867,905
Duty, per cent. of imports—	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
(*a*.) On dutiable imports	38·18	37·04	32·89	33·85	34·75
(*b*.) On all merchandise ..	26·25	25·13	20·30	16·86	16·06

* Including excise duties levied on certain imports manufactured in bond.

The average rate levied on dutiable goods in 1919 was thus very slightly higher than before the tariff revision of 1907, although the average on all merchandise shows a decrease of rather more than 20 per cent. The proportion of imported merchandise free of duty amounted to 53·79 per cent. in 1919, the corresponding figures for 1918 and 1917 being 54·97 and 54·49 per cent. respectively, and for 1906 38·29 per cent.

PREFERENTIAL TARIFF.

Though the preferential tariff of New Zealand covers a considerable number of items, the amount of revenue obtained from it has only recently attained any importance. The following table shows the extent of the imports which are affected by preference, by giving the percentage of the total imports and of foreign imports so affected. It will be seen that the proportions have increased after the tariff changes of 1903, 1907, and 1917.

Full details by classes of the imports during 1919 of goods subject to preferential duties have already been quoted on page 161.

IMPORTS AFFECTED BY PREFERENTIAL SURTAX.

Year.	Value of Imports.			Imports on which Surtax was paid.	Percentage of	
	Total.	British Empire.	Foreign Countries.		Total Imports.	Foreign Imports.
	£	£	£	£	Per Cent.	Per Cent.
1903	12,788,675	10,648,142	2,140,533	1,752	0·01	00·08
1904	13,291,694	11,029,694	2,262,000	487,867	3·67	21·57
1905	12,828,857	10,709,642	2,119,215	599,764	4·68	28·30
1906	15,211,403	12,890,016	2,321,387	620,600	4·08	26·73
1907	17,302,861	14,942,183	2,360,678	658,027	3·98	27·87
1908	17,471,284	14,780,276	2,691,008	895,007	5·12	33·26
1909	15,674,719	13,554,962	2,119,757	842,407	5·37	39·74
1910	17,051,583	14,465,824	2,585,759	1,000,267	5·87	38·68
1911	19,545,879	16,497,340	3,048,539	1,159,342	5·93	38·03
1912	20,976,574	17,073,272	3,903,302	1,337,182	6·37	34·26
1913	22,288,302	18,348,249	3,940,053	1,325,057	5·95	33·63
1914	21,856,096	17,649,784	4,206,312	1,228,207	5·62	29·20
1915	21,728,834	17,727,137	4,001,697	1,321,853	6·08	33·03
1916	26,339,283	20,833,461	5,506,822	2,071,175	7·86	37·61
1917	20,919,265	15,591,308	5,327,957	2,251,428	10·77	42·26
1918	24,234,007	16,017,554	8,216,453	3,457,004	14·27	42·07
1919	30,671,698	19,519,619	11,152,079	4,794,249	15·63	42·99

The system of recording imports was changed in 1914, and for that and subsequent years statistics are given of the countries of origin as well as the countries of shipment, so that it is now possible to get better comparisons of the value of goods produced each year in the various countries with which New Zealand trades. Previously the imports credited to any country were those shipped to New Zealand from that country, and it is evident that more foreign goods come into New Zealand than are shipped direct.

Reciprocity with South Africa.

There has been a reciprocal arrangement with British South Africa since 1907, by which New Zealand admits certain goods, mainly wine and tobacco, at reduced rates of duty, in return for similar concessions granted by the South African Union. The following table shows the growth of trade since 1907:—

Year.	Imports.		Exports.
	According to Country of Shipment.	According to Country of Origin.	
	£	£	£
1907	1,067	*	63,717
1908	5,494	*	86,465
1909	6,221	*	121,931
1910	7,443	*	45,555
1911	9,936	*	43,755
1912	13,733	*	83,229
1913	7,796	*	61,651
1914	33,229	98,437	60,826
1915	42,654	55,826	11,279
1916	71,300	105,000	6,681
1917	56,392	98,538	1,588
1918	43,856	110,645	718
1919	62,628	169,222	2,241

* Not available.

Prior to 1914 the figures for imports represent only the value of goods shipped from South Africa. As a rule, very little of this trade, however, comes within the scope of the reciprocal treaty; in 1919 imports amounting in value to £41,743 were subject to reduction of duty in connection with the South African reciprocal tariff.

SECTION XI.—COMMERCE—*continued.*

SUBSECTION E.—IMPERIAL GOVERNMENT SUPPLIES.

THE purchase and control of produce requisitioned on behalf of the Imperial Government is in the hands of the Department of Imperial Government Supplies. This Department, which commenced its operations on the 3rd March, 1915, was primarily constituted for the purpose of controlling the purchase of frozen meat on behalf of the Imperial Government. Later its operations in this connection were extended to include many other items of New Zealand produce, notably wool, butter, cheese, and hides. In addition a considerable amount of business has been undertaken on behalf of the New Zealand Government, such as the purchase of butter and cheese for use in camps and on transports, the butter-fat levy, and the internal arrangements in connection with the sale and shipment of kauri-gum.

FROZEN MEAT.

The requisition of frozen meat on behalf of the Imperial Government commenced on the 3rd March, 1915, and has since then comprised all beef, mutton, and lamb in store or produced at freezing-works available for shipment.

The preliminary arrangements in connection with this requisition were made at conferences convened by the Prime Minister and attended by representatives of the industry, and the schedule of prices and general arrangements necessary in connection with the requisition were agreed upon and subscribed to by all parties interested.

The rates for first quality meat are quoted hereunder:—

Description.	Prices operating from 3rd March, 1915, to 19th October, 1916.	Prices operating from 20th October, 1916.
	d.	d.
Wethers, first quality, 72 lb. and under	4½	5⅜
Ewes, first quality, 72 lb. and under	4	4⅞
Lamb, specially prime and Canterbury quality, 42 lb. and under	5⅝	6½
Beef, prime ox	4¾	5
Mutton, legs	5½	6⅜

Advances of payment are made to the extent of 75 per cent. of the value after the meat has been in store six weeks.

Between the 3rd March, 1915, and the 31st March, 1920, 2,885,043 quarters of beef, 12,299,080 carcases of mutton, and 13,625,510 carcases of lamb had been shipped under the Government-purchase scheme, the quantities shipped from the various ports being as shown in the table following. The

total payments to the 31st March, 1920, in respect of meat-purchases amounted to £44,344,503.

SHIPMENTS OF MEAT UNDER IMPERIAL-PURCHASE SCHEME, 3RD MARCH, 1915, TO 31ST MARCH, 1920.

Port of Shipment.	Quarters Beef.	Carcases Mutton.	Carcases Lamb.
Whangarei	149,580	61,514	9,818
Auckland	565,150	379,752	348,605
Whakatane	36,299	56,311	6,666
Tokomaru Bay	41,435	385,198	162,138
Gisborne	245,453	1,363,419	548,634
Napier	215,535	1,885,288	1,080,929
Waitara	248,556	249,989	150,892
New Plymouth	54,818	108,028	36,946
Wanganui	219,493	683,462	456,491
Wellington	578,311	3,490,327	2,773,406
Totals, North Island ..	2,354,630	8,663,288	5,574,525
Nelson	17,200	52,894	63,253
Picton	2,047	131,886	190,744
Lyttelton	162,580	1,427,026	3,804,467
Timaru	44,618	770,750	2,255,495
Oamaru	..	111,143	208,835
Dunedin	87,598	479,796	694,744
Bluff	216,370	662,297	833,447
Totals, South Island ..	530,413	3,635,792	8,050,985
Grand totals	2,885,043	12,299,080	13,625,510

The quantity of meat in store on the 31st March, 1920, was 6,628,789 freight carcases.

CHEESE.

The requisition of cheese commenced operation on the 4th November, 1915. One-third of the 1915–16 output (first grade) was purchased at 7¼d. per lb. f.o.b; all 1916–17 output (first and second grade) at 9½d. and 9¼d.; and the 1918–19 and 1919–20 outputs at 10⅜d., 10½d., and 10d., according to quality.

Dairy cheese also has been purchased at 8½d. and 8d. respectively for first- and second-grade quality in 1917–18, and 9¼d. and 8¾d. in the next two seasons.

The following table shows the number of crates and the value of all cheese purchased to the 31st March, 1920:—

Season.	Number of Crates.	Amount. £	Season.	Number of Crates.	Amount. £
1915–16 ..	189,502	918,104	1918–19 ..	789,550	5,634,389
1916–17 ..	518,327	3,271,982	1919–20 ..	644,773	4,269,096
1917–18 ..	756,142	5,013,295		2,898,294	£19,106,866

The figures for the 1919–20 season include 274,411 crates awaiting shipment on the 31st March. The conditions of purchase provide for the

payment on delivery of the cheese f.o.b. ocean steamer, subject, however, to an advance of 90 per cent. in the event of the cheese remaining in store for a period of fourteen days prior to shipment.

Butter.

The Dominion's output of butter was requisitioned by the Imperial Government as from the 20th November, 1917. The prices paid for the 1919–20 output were as follows: Creamery butter, first grade, 181s. per hundredweight; second grade, 6d. per hundredweight less for each half grade-point by which the butter falls below first grade. Whey butter and dairy butter, 162s. 4d. per hundredweight; second grade, ½d. per pound less. Milled butter, 148s. 4d. per hundredweight; second grade, ½d. per pound less.

The total quantity of butter purchased during each season to the 31st March, 1920, was as follows:—

Season.	Number of Boxes.	Value. £
1917–18	724,699	2,829,032
1918–19	667,114	2,926,139
1919–20	483,099	2,387,929
	1,874,912	£8,143,100

The value shown against the 1919–20 season includes the amount advanced against 77,482 boxes awaiting shipment on the 31st March.

Equalization Funds.

During 1917–18 many of the factories which had been supplying butter for local requirements were attracted by the higher prices prevailing in the United Kingdom, and, withdrawing from the local markets, exported their produce.

An attempt was made to overcome this difficulty by forming into an Equalization Fund the 50 per cent. of the profits arising out of the sale of requisitioned butter in the United Kingdom, which had been returned by the Imperial Government. The amount of this fund was £307,919, and distribution approximately equalized the returns to factories for export or local sales to 1s. 5¾d. per lb. at factory door.

Section 16 of the Appropriation Act, 1919, authorized the Dominion Government to assume the liability of equalizing the profits on local butter-sales, and appropriated £340,000 for this purpose for the 1918–19 and 1919–20 seasons.

For the 1918–19 season payments totalling £211,815 were made to manufacturers selling butter for local consumption, the rate amounting to 1·955d. per lb. An interim payment of 1¾d. per lb. is being made for the 1919–20 season

Wool.

At the request of the Imperial Government, the Dominion Government made arrangements for the purchase of the 1916–17 wool-clip for war purposes.

The prices paid for the wool-clip were fixed at a 55-per-cent. advance on those ruling in 1913–14. The scale of qualities and values (to which 55 per cent. must be added) is as follows:—

Description of Wool.	Ranges of Values per Pound according to Quality.			
Superior merino combings	From 12d.	to	14½d.	+ 55 per cent.
Medium to good merino	„ 9¾d.	„	11½d.	
Inferior merino	„ 8½d.	„	9½d.	
Superior half-bred	„ 12d.	„	14d.	
Medium to good half-bred	„ 9¾d.	„	12d.	
Inferior half-bred	„ 9d.	„	10d.	
Superior crossbred	„ 10½d.	„	12d.	
Medium to good crossbred	„ 9d.	„	11d.	
Inferior crossbred	„ 7¾d.	„	9d.	
Lincoln and Leicester	„ 8¾d.	„	10½d.	
Lambs, good	„ 11d.	„	13d.	
Lambs, medium	„ 9d.	„	10¾d.	

The 1917–18, 1918–19, and 1919–20 wool-clips have also been accepted on the same terms. In addition the Imperial Government undertook to return to New Zealand wool-growers half the profits on wool sold for other than military purposes.

Since the commencement of the requisition the following quantities of wool have been disposed of as under:—

	Bales.
Total number of bales valued (as per valuation certificates received)	2,039,157
Total number of bales paid for	2,031,092
Number of bales shipped	1,251,578
Number of bales awaiting shipment	787,579

In addition 282,185 bales of scoured and slipe wool had been shipped to 31st March, 1920, at which date 56,142 bales were available for shipment.

For the 2,031,092 bales of wool paid for as mentioned above, the sum of £49,600,913 has been disbursed.

Wool for Local Mills.

Wool required for local mills is supplied at Imperial Government schedule rates, plus the cost of valuation.

Freezing Companies' Slipe Wool.

To the 31st March, 1920, 68,880 bales had been purchased subject to valuation in the United Kingdom, and of this quantity 67,085 bales had been shipped to the United Kingdom and 1,795 bales to other Governments; 138,406 bales have been valued and purchased in New Zealand, and of this number 80,789 bales have been shipped to the United Kingdom and 7,604 bales to other Governments. The total payments for freezing companies' slipe wool were £5,880,344.

Sheep-skins.

The purchase of sheep-skins by the New Zealand Government on behalf of the Imperial Government commenced on the 5th February, 1917. The scale of prices on which purchases are made is as follows:—

Skins.	Merino.	Half-bred.	Fine Crossbred.	Coarse Crossbred.
	d.	d.	d.	d.
Three-quarter to full-woolled, sound..	10½–11½	13 –14	12 –13	11½–12½
Half-woolled, sound	8¾– 9¾	11 –12	10½–11½	10 –11½
Short to quarter-woolled, sound ..	7½– 8½	9¼–10¾	9¼–10¾	8½–10½
Shorn, sound	5¾– 6¾	8 – 9	8½– 9½	8 –10
Lamb-skins, sound	11–12½			

All skins with damaged or faulty pelts are valued at prices proportionate to those shown above. After purchase, the skins are allocated to fellmongers for treatment, the resultant slipe wool and pelts being shipped to the United Kingdom.

The payment to fellmongers for their services was increased as from the 1st January 1920, to the following rates:—

Fellmongering	.. 2½d. per pound on the weight of wool.
Curing pelts	.. 4s. 6d. per dozen pelts (casks extra).

At the 31st March, 1920, the number of skins purchased and distributed to fellmongers was 6,380,501, value £2,573,155. Payments to fellmongers amounted to £116,204.

Other Commodities.

Other commodities which have been purchased from time to time through the agency of the Imperial Supplies Department include Glaxo (dried milk), condensed milk, scheelite, rabbits, hides and calf-skins.

Total Payments to 30th June, 1920.

From the 3rd March, 1915, to the 30th June, 1920, total payments amounting to £141,680,297 were made by the Imperial Supplies Department. The chief items were—Frozen meat, £48,719,056; wool, £57,305,577; cheese, £20,782,214; butter, £9,402,445; sheep-skins, £2,820,347; hides, £735,663; scheelite, £178,479.

SECTION XII.—SHIPPING.

REGISTERED VESSELS.

THE number and tonnage of the registered vessels belonging to the several ports of registry in the Dominion on the 31st December, 1919 (distinguishing sailing-vessels and steamers), were as under:—

Ports.	Sailing-vessels.			Steam-vessels.		
	Vessels.	Gross Tonnage.	Net Tonnage.	Vessels.	Gross Tonnage.	Net Tonnage.
Auckland	114	8,294	6,935	207	23,402	12,064
Napier	4	266	253	29	3,842	2,240
Wellington	14	3,179	2,892	37	11,704	5,828
Nelson	7	189	152	15	2,813	1,307
Lyttelton	12	3,713	3,615	18	6,188	3,000
Timaru	1	733	690	1	942	488
Dunedin	20	7,608	7,335	64	66,176	39,462
Invercargill	2	372	344	11	1,194	554
Totals	174	24,354	22,216	382	116,261	64,943

Auckland is the port of registry of the majority of the vessels forming New Zealand's "mosquito" fleet, the average net tonnage of the 321 vessels on the Auckland register being under 60 tons. At Dunedin many of the vessels of the Union Steamship Company of New Zealand are registered. Shortly after the outbreak of war, however, many of the principal vessels of this company were transferred to the London register, the large decrease in 1914 as compared with 1913, shown in the next table, being due to this cause.

At End of Year.	Sailing-vessels on New Zealand Register.			Steam-vessels on New Zealand Register.		
	Vessels.	Gross Tonnage.	Net Tonnage.	Vessels.	Gross Tonnage.	Net Tonnage.
1910	254	40,894	38,631	352	192,637	112,475
1911	244	37,710	35,651	361	196,374	114,973
1912	242	36,558	34,308	374	208,887	121,772
1913	225	33,931	31,619	391	220,186	127,691
1914	197	22,714	20,984	384	135,838	77,901
1915	196	23,546	21,762	385	126,549	71,695
1916	190	23,664	21,853	390	124,833	70,442
1917	184	24,356	22,404	376	115,683	65,092
1918	178	25,200	23,158	379	116,551	65,388
1919	174	24,354	22,216	382	116,261	64,943

The tonnage of sailing-vessels on the register has decreased rapidly during recent years, though a slight improvement has been effected since 1914, due to the demand for vessels to replace those used for war purposes.

OVERSEA SHIPPING.

The number and tonnage of vessels entered and cleared during each of the last ten years are as shown in the following table:—

Year.	Entered.				Cleared.			
	Vessels.		Tonnage.		Vessels.		Tonnage.	
	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.
1910 ..	475	134	1,317,284	71,747	464	124	1,299,082	68,125
1911 ..	499	122	1,417,943	64,435	498	126	1,402,103	65,299
1912 ..	582	95	1,619,411	52,681	572	94	1,620,057	48,573
1913 ..	563	82	1,692,929	46,056	559	76	1,658,457	41,350
1914 ..	567	79	1,676,840	48,009	582	75	1,735,601	46,380
1915 ..	581	57	1,613,679	27,746	585	64	1,604,050	31,883
1916 ..	520	54	1,418,991	29,526	534	56	1,461,597	29,996
1917 ..	485	58	1,378,676	27,100	486	61	1,353,975	27,907
1918 ..	458	85	1,225,481	54,067	464	80	1,264,105	46,522
1919 ..	472	92	1,427,759	53,124	475	99	1,444,206	61,050

NATIONALITY OF VESSELS.

Tables are given showing the number and tonnage of British, colonial, and foreign vessels entered and cleared since 1909.

VESSELS ENTERED AND CLEARED.

Year.	British.		Colonial.		Foreign.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
				Entered.				
1909 ..	155	587,235	407	633,813	43	42,887	605	1,263,935
1914 ..	191	791,529	398	847,910	57	85,410	646	1,724,849
1917 ..	249	1,008,759	262	336,027	32	60,990	543	1,405,776
1918 ..	193	838,198	289	374,130	61	67,220	543	1,279,548
1919 ..	266	1,114,479	239	285,383	59	81,021	564	1,480,883
				Cleared.				
1909 ..	152	572,384	406	641,055	38	40,439	596	1,253,878
1914 ..	194	826,358	407	867,184	56	88,439	657	1,781,981
1917 ..	253	995,346	261	327,822	33	58,714	547	1,381,882
1918 ..	203	872,204	289	377,383	52	61,040	544	1,310,627
1919 ..	273	1,139,812	239	286,062	62	79,382	574	1,505,256

A more detailed account of the nationality of registry of the shipping of 1919 reveals the following: Of tonnage entered in that year 1,114,479 tons belonged to vessels on the United Kingdom registry; 164,429 tons on the New Zealand registry; 120,954 on other colonial registries; 54,528, United States; 11,827, Dutch; 7,394, Japanese; 4,604, Norwegian; 2,391, French; and 277, Belgian. Tonnage of vessels cleared was approximately the same.

OVERSEA SHIPPING.—TONNAGE AT VARIOUS PORTS.

The net tonnage of oversea shipping entered and cleared at the various ports during the years 1909 and 1919 is given in the next table. Vessels

arriving from abroad are recorded at the first port of call, and those departing oversea are cleared at the port from which they finally sail.

Port.	1909.		1919.	
	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.
Auckland ..	554,811	330,870	684,705	418,741
Kaipara.. ..	5,311	33,101	1,360	9,607
Gisborne ..	3,761	5,739	10,125	8,002
New Plymouth ..	3,619	..	2,528	3,987
Waitara.. ..	..	..	..	5,164
Wanganui ..	2,749	6,452	19,209	14,850
Wellington ..	399,028	478,093	518,995	847,883
Napier	3,577	8,769	10,946	16,674
Wairau (including Picton)	2,151	5,361	..	5,412
Nelson	1,574	2,185	467	..
Westport ..	15,797	34,388	..	7,010
Greymouth ..	3,258	15,155	324	26,973
Lyttelton ..	36,035	88,499	138,332	40,883
Timaru	8,635	4,947	4,303	7,406
Oamaru.. ..	650	..	1,219	..
Dunedin ..	58,572	68,866	51,530	62,526
Bluff	164,407	171,453	36,840	30,138
Totals ..	1,263,935	1,253,878	1,480,883	1,505,256

Coastwise Shipping.

The extensive coast-line and numerous harbours of New Zealand facilitate travelling and the distribution of goods by sea. The total tonnage of coastwise shipping, as shown below, includes that of oversea vessels which, after entry at the first port of arrival, proceed to other ports within the Dominion for the purpose of delivering and loading cargo, each movement, until the final sailing, being recorded as coastwise shipping.

Coastwise Shipping.

Year.	Entered.				Cleared.			
	Vessels.		Tonnage.		Vessels.		Tonnage.	
	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.	Steam.	Sailing.
1910 ..	22,272	4,500	11,839,244	242,652	22,217	4,478	11,848,680	241,302
1911 ..	23,092	4,024	12,060,227	206,427	23,064	4,033	12,026,951	208,820
1912 ..	23,654	3,843	12,451,499	180,698	23,622	3,870	12,457,316	181,718
1913 ..	21,937	3,764	11,832,143	173,494	21,922	3,733	11,830,078	172,715
1914 ..	23,019	3,880	12,217,206	175,757	23,026	3,846	12,154,108	179,761
1915 ..	21,890	3,204	10,918,580	133,102	21,927	3,202	10,899,058	133,519
1916 ..	21,228	3,092	9,919,576	129,253	21,156	3,131	9,713,698	127,182
1917 ..	18,503	2,283	8,172,124	93,845	18,403	2,295	8,164,407	95,808
1918 ..	17,492	1,967	6,942,341	113,124	17,493	1,923	7,041,489	103,059
1919 ..	17,631	1,976	7,274,635	91,494	17,633	1,974	7,277,281	90,593

In the next table is given the total tonnage of coastwise shipping in the chief ports, 1919. The figures are correct to the nearest 1,000 tons, the last three figures being omitted.

Port.	Tonnage entered.*	Tonnage cleared.*	Port.	Tonnage entered.*	Tonnage cleared.*
Auckland ..	805	1,083	Picton ..	264	258
Onehunga ..	95	95	Nelson ..	219	219
Thames ..	82	82	Westport ..	254	247
Whangarei ..	197	204	Greymouth ..	195	170
Gisborne ..	307	301	Lyttelton ..	1,159	1,260
New Plymouth	140	140	Timaru ..	228	220
Wanganui ..	125	129	Oamaru ..	92	93
Wellington ..	2,018	1,692	Dunedin ..	389	393
Napier ..	359	359	Bluff ..	94	100

* Shown in thousands of tons.

A large part of the shipping shown as entered and cleared in the case of Wellington and Lyttelton is due to the fact that these ports are the termini of the daily inter-Island ferry service.

Seamen and Waterside Workers.

The number of seamen and waterside workers belonging to the registered local unions respectively at each of the four centres was—

	Seamen's Union.	Waterside Workers' Union.		Seamen's Union.	Waterside Workers' Union.
Auckland ..	1,145	1,380	Lyttelton ..	..	535
Wellington ..	1,710	2,270	Dunedin ..	649	482

Survey of Ships.

The Shipping and Seamen Act of 1908, and its amendment of 1909, provide for an annual survey by Government surveyors of all vessels, with a view to ensuring their seaworthiness. Certificates of survey were issued in 1919-20 to 314 steamers, 464 oil-engine vessels, and 59 sailing-vessels.

Lighthouses.

The long coast-line of the Dominion is marred in many places by hidden rocks or reefs and other perils to navigation. This has compelled the erection of some sixty-five lighthouses of various types. No fewer than fifteen of these are situated in the stormy area of Cook Strait and the bays opening therefrom, reaching from where the red and white rays of Cape Farewell light give warning of the seven-mile-long sandspit at the northern extremity of the South Island to the bluff shore marked by the Cape Palliser light at the southern point of the North Island.

The average cost of erection and equipment of the coastal lighthouses was about £6,000 per light. The two most costly were Cape Brett Lighthouse (£11,237) on the Auckland Peninsula, and Dog Island Lighthouse (£10,481)

in Foveaux Strait. The average cost of maintenance for 1919–20 was: Salaries, £373; oil and stores, &c., £301: total, £674. Light dues collected at the various ports in 1919–20 were as follows: Auckland, £12,153; Wellington, £11,230; Lyttelton, £3,095; Dunedin, £1,218; other ports, £4,468: making a total of £32,164.

Wrecks.

During the year 1919–20 sixty-five inquiries into shipping casualties were held, eleven of which were Magisterial. Lives lost during the year numbered nineteen, including eight in the burning of the s.s. "Tainui," and ten in the loss of the cutter "Janet."

A summary of shipping casualties in or near New Zealand coasts in the past year is as follows:—

	No.	Tonnage.
Strandings—		
Total wrecks	3	175
Partial loss	7	8,210
Slight damage	6	762
No damage	11	11,955
Collisions—		
Partial loss	3	43
Slight damage	3	37
Collisions—*continued.*		
No damage	6	574
Fires—		
Total loss	1	59
Slight damage	4	6,258
No damage	4	18,729
Miscellaneous	15	7,976
Totals	63	54,778

SECTION XIII.—RAILWAYS.

State Railways.

At the present time there are over 3,000 miles of railway open for traffic of which 2,996 are State-owned. State railways are divided into nine distinct sections, as follows:—

Section.	Length. Miles.
North Island main lines and branches	1,126
Whangarei	74
Kaihu	20
Gisborne	49
Total, North Island ..	1,269

Section.	Length. Miles.
South Island main lines and branches	1,417
Westland	157
Westport	36
Nelson	61
Picton	56
Total, South Island ..	1,727

The gauge is 3 ft. 6 in., and a steel rail of 70 lb. weight per lineal yard is the standard for the permanent-way, and is in use on some 1,304 miles of line. Some 1,527 miles are still in 53 lb., 55 lb., and 56 lb. steel rails, and most of the remainder is in lighter material. Sleepers, which are laid down to the number of 2,100 to the mile, are principally Australian hardwoods or New Zealand silver-pine or totara.

Rolling-stock.

Since 1901 all carriages and wagons required for use on the State railways have been manufactured in the railway workshops of the Dominion. The locomotives also are now all built in the Dominion, mostly in the railway workshops. A new passenger locomotive, Class Ab, was brought into operation during 1915, and has been adopted as a standard type. This is a simple superheated tender-engine of the "Pacific" type — weight in working trim, 79 tons; tractive power, 20,000 lb. The standard goods-locomotive used is of the four-cylinder balanced compound type, weighs 94 tons, and has a tractive power of 29,840 lb. Standard carriages are 50 ft. in length, fitted with chair seats to accommodate forty-four passengers, and lighted by the Pintsch-gas system. All rolling-stock is fitted with the Westinghouse brake.

Rolling-stock, State Railways of Australasia.

State.	Miles open for Traffic.	Locomotives.	Passenger Vehicles.	Wagons and Brake-vans.
		Number.	Number.	Number.
Victoria	4,190	798	1,663	20,392
New South Wales	4,737	1,279	1,659	23,076
Queensland	5,469	658	829	14,471
South Australia	2,285	489	649	9,496
Western Australia	3,507	424	423	10,078
Tasmania	599	80	175	1,834
New Zealand	**2,996**	**616**	**149**	**22,937**

Note.—The Australian figures are for the year ended 30th June, 1919; the New Zealand figures for the year ended 31st March, 1920.

Passengers and Goods.

The following statement shows the number of miles of Government railways open in the Dominion, the number of train-miles travelled and of passengers carried, and the tonnage of goods traffic in the past decade.

Year ended 31st March.	Length open (Miles).	Train-mileage.	Passengers.	Season Tickets issued.	Goods and Live-stock.*
					Tons.
1911	2,753	8,141,075	11,200,613	222,104	5,863,674
1912	2,798	8,371,687	11,891,134	236,957	5,887,908
1913	2,851	9,016,224	13,123,879	265,259	6,246,128
1914	2,854	9,319,268	13,355,893	287,037	6,019,633
1915	2,945	9,383,420	13,565,772	302,912	6,453,472
1916	2,960	9,356,522	14,201,506	330,622	6,370,945
1917	2,960	9,146,331	14,173,115	355,832	6,239,172
1918	2,983	7,468,646	11,408,156	322,487	5,742,968
1919	2,983	7,477,583	11,374,521	351,124	5,611,738
1920	2,996	7,408,608	12,760,814	400,621	6,000,279

* The equivalent tonnage for live-stock has been given.

The principal commodities carried on the State railways during each of the past ten years were,—

Year ended 31st March.	Wool.	Timber.	Grain.	Minerals.	Cattle.	Sheep and Pigs.
	Tons.	Tons.	Tons.	Tons.	Number.	Number.
1911	143,247	627,107	1,013,298	2,655,250	210,848	6,071,670
1912	141,607	718,414	949,556	2,676,783	207,546	5,601,711
1913	147,735	695,060	1,181,899	2,760,983	221,595	5,524,935
1914	155,709	676,858	1,050,395	2,551,614	254,291	7,006,268
1915	162,002	621,963	1,103,352	2,988,028	314,219	7,086,461
1916	154,633	625,866	1,061,987	2,831,959	371,529	7,387,269
1917	*	579,428	*	2,787,523	402,769	7,269,544
1918	*	523,784	*	2,572,576	362,134	6,502,090
1919	*	487,729	*	2,444,007	346,544	6,691,760
1920	*	611,171	*	2,300,760	357,976	7,316,556

* Information not available.

Cost of Construction.

The total cost of construction of open lines up to the 31st March, 1920, was £36,390,115. The amount spent on lines in course of construction and not handed over to the Working Railways Department for traffic purposes was £3,607,225, making the total capital invested in State railways £39,997,340.

Capital invested in State Railways.

—	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
	£	£	£	£	£
Lines open for traffic	34,857,882	35,378,664	36,001,432	36,167,681	36,390,115
Lines under construction	2,477,198	2,808,509	2,796,731	3,093,201	3,607,225
Totals ..	37,335,080	38,187,173	38,798,163	39,260,882	39,997,340

So varied are the geographical features of the Dominion that a great disparity exists in the cost of constructing the individual sections of lines. The numerous mountain-chains and rivers make railway-construction in general both difficult and expensive.

COMPARISON OF COST AND REVENUE OF EACH SECTION, 1919–20.

Section.	Capital Cost of Open Lines, 31st March, 1920.	Capital Cost per Mile (Open Lines).	Net Revenue per Mile of Open Line, 1919–20.
North Island—	£	£	£
Whangarei	775,556	10,480	114·65
Kaihu	99,962	4,998	— 173·50*
Gisborne	682,922	13,927	151·51
Main line and branches	16,163,269	14,355	963·95
Total	17,721,709	13,965	865·13
South Island—			
Westland	2,122,303	13,518	126·53
Westport	606,236	16,840	734·69
Nelson	444,963	7,294	— 27·05*
Picton	680,466	12,151	48·61
Main line and branches	14,710,176	10,381	354·47
Total	18,564,144	10,749	318·28
Lake Wakatipu steamer service ..	43,708	..	..
W.R.D. stock, &c.	60,554	..	..
Grand total	36,390,115	12,132	549·87

* Loss.

REVENUE.

The railways of New Zealand have been looked upon more as adjuncts to the settlement of the country and the development of its natural resources than as an investment from which large profits should directly accrue.

RAILWAY REVENUE.

Year ended 31st March.	Gross Revenue from				Total Gross Revenue.	Net Revenue.	Percentages of Net Revenue to Capital Cost.
	Passenger-fares.	Parcels, Luggage, and Mails.	Goods and Live-stock.	Rents and Miscellaneous.			
	£	£	£	£	£	£	£ s. d.
1911	1,223,412	193,789	1,961,078	115,903	3,494,182	1,190,910	4 1 3
1912	1,319,114	203,394	2,032,785	121,276	3,676,509	1,210,613	3 19 7
1913	1,461,873	215,209	2,157,686	136,234	3,971,002	1,265,393	4 0 9
1914	1,450,480	236,761	2,209,398	146,689	4,043,328	1,163,005	3 12 3
1915	1,482,382	227,521	2,249,399	146,155	4,105,457	1,185,002	3 10 7
1916	1,722,702	236,705	2,423,493	165,456	4,548,356	1,637,473	4 14 4
1917	1,878,048	243,832	2,498,862	185,068	4,800,810	1,873,946	5 5 11
1918	1,802,597	254,110	2,465,241	165,752	4,687,700	1,644,793	4 11 11
1919	1,950,281	258,525	2,608,336	171,490	4,988,632	1,680,057	4 12 11
1920	2,303,987	290,453	2,956,237	201,810	5,752,487	1,647,420	4 10 8

The revenue from passenger-fares during the year 1919-20 represented an expenditure on railway travel of £1 18s. 6d. per head of mean population, including Maoris.

REVENUE OF STATE RAILWAYS IN AUSTRALASIA.

State.*	Average Miles of Line worked.	Train-miles run (,000 omitted).	Gross Revenue (,000 omitted).	Net Revenue.		
				Amount (,000 omitted).	Per Train-mile.	Per Cent. of Capital.
			£	£	s. d.	
Queensland ..	5,469	9,943	3,985	294	0 8	0·73
New South Wales	4,737	19,935	9,958	3,054	3 1	4·03
Victoria ..	4,190	13,032	6,432	2,421	3 9	4·21
South Australia ..	2,285	5,413	2,391	562	2 1	2·96
Western Australia	3,507	4,259	1,873	305	1 5	1·70
Tasmania ..	599	1,108	401	77	1 5	1·51
New Zealand ..	**2,996**	**7,409**	**5,752**	**1,647**	**4 5**	**4·53**

* Australian year ends June, 1919; New Zealand, March, 1920.

EXPENDITURE.

The expenditure under various heads for each of the past ten years has been as follows :—

Year ended 31st March.	Maintenance of Way.	Locomotive Power.	Carriages and Wagons.	Traffic.	Lake Wakatipu Steamers	Head and Departmental Offices.	Total.
	£	£	£	£	£	£	£
1911 ..	693,445	695,062	180,221	631,380	5,029	98,135	2,303,272
1912 ..	735,546	743,443	209,039	670,631	5,997	101,240	2,465,896
1913 ..	765,860	833,146	226,146	768,936	6,619	104,902	2,705,609
1914 ..	763,207	921,564	232,745	838,222	7,046	117,539	2,880,323
1915 ..	738,550	954,868	228,145	870,392	6,085	122,415	2,920,455
1916 ..	740,349	934,737	225,968	889,991	6,377	113,461	2,910,883
1917 ..	720,840	937,780	238,868	904,318	6,602	118,456	2,926,864
1918 ..	710,655	962,222	283,248	954,142	7,664	124,976	3,042,907
1919 ..	752,558	1,075,489	306,308	1,032,609	6,985	134,626	3,308,575
1920 ..	837,910	1,397,993	387,498	1,301,935	7,964	171,767	4,105,067

RAILWAY EMPLOYEES.

The number of men employed in operating the State railways at the 31st March, 1920, was 13,385. The staff is divided into two divisions—namely, the first or clerical division and the second or out-of-door division.

RAILWAY EMPLOYEES.

As at 31st March.	General.	Traffic.	Maintenance.	Locomotive.	Totals.
1916	693	5,041	3,931	5,303	14,968
1917	675	4,798	3,586	4,649	13,708
1918	660	4,612	3,410	4,320	13,002
1919	661	4,605	3,347	3,878	12,391
1920	876	4,740	3,364	4,405	13,385

Railway employees are under a system of classification, first introduced in 1896, and revised at various times since then.

Appeal Boards (one in each Island) have been constituted to hear and redress grievances of men dissatisfied with decisions respecting the withholding of annual increments, promotion, loss of status, or breaches of discipline involving fines in excess of £2. Each Board consists of a Magistrate and two members of the Railway service elected by the members thereof. The Minister of Railways has the power of veto in respect of any decision of the Board.

A superannuation fund in connection with the Railway service was established in 1903. Full information concerning this is given in the section dealing with Pensions and Superannuation Funds.

Private Railways.

Private railways have a total mileage of 138 miles. A complete list is as follows:—

Railway.	Location.	Length of Railway.
		M. C. L.
Waipa Railway and Collieries (Limited)	Ngaruawahia	5 50 0
Taupo Totara Timber Company (Limited)	Putaruru	50 40 0
Waihi Gold-mining Company (Limited)	Waikino	5 72 0
Sanson Tramway	Sanson–Himatangi ..	17 0 0
Castlecliff Railway	Wanganui–Castlecliff ..	3 40 0
Napier Harbour Board's line	Port Ahuriri	1 24 50
Homebush Coal Company	Coalgate	3 37 0
Waronui Coal Company	Milton	5 33 0
Taratu Coal Company	Lovell's Flat	7 47 0
Kaitangata Coal Company	Stirling	5 45 0
Dunedin City Corporation Ocean Beach Railway	Dunedin .. (about)	3 14 0
Nightcaps Coal Company	Wairio–Nightcaps ..	2 33 63
Ohai Railway	From Wairio	5 60 0
Westport Harbour Board	Westport–Cape Foulwind and Quarries	16 14 0
Denniston Incline (Westport Coal Company's line)	Waimangaroa – Conn's Creek	1 2 0
Paparoa Company's Railway	(Worked by N.Z.R.) ..	1 68 21
Reefton Coal Company	Reefton	2 20 0
Tongariro Timber Company	Kakahi	*
Total mileage	..	138 40 0

* Not available.

Railway Accidents.

The history of railways in New Zealand has been one of comparative freedom from accidents of a serious nature. A quinquennial summary is quoted.

RAILWAY ACCIDENTS.

Year ended 31st March.	To Passengers.	To Employees.	To Others.	Fatal.	Serious.	Minor.	Totals.
1916 ..	28	919	27	33	6	935	974
1917 ..	25	852	22	24	8	867	899
1918 ..	11	765	29	22	13	770	805
1919 ..	33	715	29	23	22	732	777
1920 ..	22	827	39	42	34	812	888

Of the persons meeting with fatal accidents in 1919-20, 6 were passengers, 18 employees, and 18 neither passengers nor employees.

SECTION XIV.—POSTAL AND TELEGRAPHIC.

THERE were 2,315 post-offices in New Zealand at the end of 1919, a decrease of twenty-nine during the year.

The table following gives information covering the past five years as to number of post-offices and numbers of articles posted and delivered:—

POSTAL BUSINESS, 1915-19.

Year.	Post-offices open at End of Year.	Articles posted and delivered.				
		Letters and Letter-cards.	Post-cards.	Books and Pattern-packets.	Parcels.	Newspapers.
1915 ..	2,402	242,547,859	9,242,792	57,693,130	5,724,576	41,311,535
1916 ..	2,379	242,121,361	8,133,697	48,868,537	6,035,103	41,807,999
1917 ..	2,346	245,796,945	7,549,867	44,934,218	6,314,875	40,566,792
1918 ..	2,344	242,527,369	7,145,606	42,301,230	6,376,469	35,476,212
1919 ..	2,315	247,143,183	7,292,922	44,320,385	6,193,475	35,498,263

The average number of letters, &c., posted in the Dominion per head of the mean population in the past ten years is as shown in the next table:—

ARTICLES POSTED PER HEAD OF MEAN POPULATION. 1910–19.

Year.	Letters and Letter-cards.	Post-cards.	Books and Parcels.	Newspapers.	Totals.
1910 ..	97·14	5·83	30·04	18·51	151·52
1911 ..	97·85	5·35	31·28	18·66	153·14
1912 ..	102·06	5·00	31·52	18·89	157·47
1913 ..	101·91	4·36	28·14	17·81	152·22
1914 ..	105·01	4·51	33·37	18·15	161·04
1915 ..	111·53	3·77	31·40	16·94	163·64
1916 ..	109·54	3·20	25·80	17·20	155·74
1917 ..	110·27	3·00	24·47	16·60	154·34
1918 ..	112·57	2·94	23·57	15·14	154·22
1919 ..	111·33	2·99	24·27	14·64	153·23

During recent years the Post Office has made very substantial extensions in the establishment of rural-mail deliveries. Many of these are performed by officers mounted on motor-cycles. By means of such deliveries it has been possible to give settlers living in the back country an efficient service.

PARCEL-POST.

The facilities afforded for the transmission of parcels through the Post Office to places within and without the Dominion have proved of much convenience to the public. The regulations admit of parcels up to 11 lb. in weight being sent to almost all the important countries of the world, and up to 28 lb. in weight for inland parcels for or from places served the whole way by railway or steamer.

The following table shows the number of parcels exchanged with the United Kingdom, the Australian States, &c., in 1919:—

Country.	Number of Parcels.			
	Received.		Despatched.	
	Number.	Weight.	Number.	Weight.
United Kingdom and foreign countries, via London	114,256	637,400	33,025	164,031
United States of America ..	61,472	427,632	2,823	12,891
N.Z. Expeditionary Force ..	384	1,423	9,851	33,593
Canada	3,348	19,414	742	2,401
Victoria	15,889	83,397	3,262	9,728
New South Wales	27,462	138,939	6,033	19,233
South Australia	493	1,799	456	1,322
Queensland	873	3,089	729	2,331
Tasmania	215	573	487	1,197
Western Australia	330	696	378	1,083
Fiji	329	747	1,265	4,255
Ceylon	282	1,342	79	326
Cape of Good Hope	1,067	3,860	60	204
Natal	..	..	261	834
India	1,544	7,383	592	3,061
Tonga	45	138	617	2,515
Tahiti	23	90	566	2,895
Hong Kong	1,273	10,826	259	1,247
Straits Settlements	142	431	175	881
Totals	229,427	1,339,179	61,660	265,028

The declared value of the parcels received from places outside the Dominion during 1919 was £1,450,476, on which the Customs duty amounted to £254,776.

Newspapers.

There are (January, 1920) 236 publications on the register of newspapers for New Zealand. Of these, some 63 are published daily, 19 being morning papers and 44 evening papers. Twenty-five appear three times per week; 27 twice per week; 62 weekly; 10 fortnightly, and 49 monthly.

Money-orders and Postal Notes.

The number of offices open for the transaction of money-order business at the end of 1919 was 807.

During 1919, 690,291 money-orders, for a total sum of £4,604,059, were issued at the various post-offices. The money-orders from places beyond New Zealand and payable in the Dominion numbered 36,605 for the amount of £181,972.

The number of offices open for the sale of postal notes at the end of 1919 was 1,036: 2,197,520 postal notes were sold, value £655,910. The notes paid numbered 2,172,727.

British postal orders issued in the Dominion during the year numbered 67,882 of a value amounting to £40,747. Those paid numbered 32,672, and represented £19,174.

Electric Telegraph.

There were 13,722 miles of telegraph and interurban telephone line open at the end of March, 1920, carrying 50,751 miles of wire. There were 15,074,067 telegrams transmitted during the year: of these, the private and Press messages numbered 14,957,615, which, together with telephone-exchange and other telegraph receipts, yielded a revenue of £1,038,506.

Telephones.

There were 62 central telephone exchanges and 229 sub-exchanges on the 31st March, 1920. The number of telephone connections (including 12,520 extensions), was 80,723, and the total telephone-exchange revenue £419,318.

Working-expenses in 1919-20 exceeded revenue by £19,027.

The capital expended on the equipment, &c., of the several telephone exchanges up to the 31st March, 1920, was £2,401,671, the average cost of each connection being thus £39 3s. 7d.

The telephone-exchange system included on the 31st March, 1920, 5,111 miles of pole line and 177,509 miles of wire.

Originally the system was worked by single aerial wires, but these were replaced some years ago at the more important exchanges by aerial and subterranean lead-covered cables. The system of subterranean cables and metallic telephone circuits is being largely extended.

The telephone-exchange system in use is generally of the magneto type, branching multiple switchboards being installed in the principal exchanges. In three installations the common battery system is in operation. The installation of automatic telephones, Western electric type, in the larger towns is well under way.

By the "party" line system of telephone-exchange service several persons may share a common line. This has, on account of the considerable reduction in rental charges, been largely availed of, particularly by those whose premises are situated at a distance from the exchange. In March, 1920, the number of party-line connections was 4,947, with a total of 16,846 subscribers.

The first coin-in-slot telephones erected in the Dominion were installed at Wellington on the 17th August, 1910. There are now 295 such instruments in use in the Dominion.

The distribution of telephones to the population of the Dominion and of the four principal centres on the 31st March, 1920, was as follows:—

	Inhabitants per Telephone.
Dominion	15
Auckland	16
Wellington	11
Christchurch	13
Dunedin	13

RADIO-TELEGRAPH.

The first wireless-telegraph station opened for commercial use was that of Wellington on 26th July, 1911. Details of the seven stations now under the control of the Post and Telegraph Department are:—

Station and Call-sign.	Hours of Service.	Wave-length, in Metres (Normal in Black Type).	Daylight Range (in Knots) on Normal Wave-length.
Awanui (V.L.A.). 173° 18′ E., 34° 54′ S.	6.30 p.m. to midnight, Continuous listening service	300, **600**, 1,000, 2,000, 2,500, 3,500	S.W. 500; L.W. 1,200.
Awarua (V.L.B.). 168° 23′ E., 46° 30′ S.	6.30 p.m. to midnight. Continuous listening service	300, **600**, 1,000, 2,000, 2,500, 3,500	S.W. 500; L.W. 1,200.
Apia, Samoa (V.M.G.). 171° 49′ W., 13° 51′ S.	Continuous ..	300, **600**, 1,000, 2,000, 2,400, 2,800, 3,300, 4,000	S.W. 500. L.W. 1,500.
Wellington (V.L.W.). 174° 46′ 39″ E., 41° 17′ 5″ S.	Continuous ..	300, **600**, 1,000 ..	300.
Chatham Islands (V.L.C.). 176° 31′ W., 47° 57′ S.	6 p.m. to 6 a.m. ..	300, **600**	300.
Auckland (V.L.D.). 174° 46′ 8″ E., 36° 50′ S.	7 p.m. to 6 a.m. ..	300, **600**, 1,000 ..	300.
Rarotonga, Cook Islands (V.M.R.). 159° 48′ 30″ W., 21° 12′ S.	7 p.m. to midnight..	300, **600**, 1,000, 1,700	300, 450 on 1,700 metres.

The Rarotonga station is of the Marconi synchronous gap type; the remainder use the Telefunken quenched gap (500 cycles) system. The aerial system in most cases comprises an umbrella aerial with earthed counterpoise for long waves and a T aerial for short waves.

The radio business transacted by the New Zealand coast stations during the past five years was as follows:—

Year ended 31st March.	Forwarded.			Received.		
	Messages.	Words.	Value.	Messages.	Words.	Value.
			£			£
1916	3,076	61,759	2,296	4,666	71,291	2,763
1917	3,018	63,872	3,023	4,651	73,149	3,032
1918	2,851	60,393	3,082	4,338	73,050	3,330
1919	4,482	93,507	5,245	6,570	235,889	6,227
1920	11,589	192,822	9,114	19,109	248,063	5,272

The above table does not include free (service) messages.

The general rate for transmission of radio-telegrams has been fixed at 5d. a word for all vessels on the Australian or New Zealand register.

The New Zealand coast stations are all reliably connected with the land-line systems. Complete arrangements exist for the prompt transmission of wireless telegrams over them, and for ensuring that distress-signals shall be immediately communicated to the proper authorities.

Ocean Cables.

The cable opened for traffic between New Zealand and Australia and Fiji on the 9th April, 1902, was completed to Bamfield, Vancouver Island, on the 31st October following, and opened for international business on the 8th December, 1902.

The route is from Auckland to Vancouver, via Norfolk Island, Fiji, and Fanning Island. The Australian connection is at Norfolk Island. The deep-sea portion of the Vancouver – Fanning Island cable is stated to be the longest in the world. Following the opening of the cable a much faster service with America and Europe has resulted.

Direct communication between Auckland and Sydney was established on the 31st December, 1912, thus giving the Pacific Cable Board an alternative route to Australia.

During the year 1919-20 the Pacific route took 67 per cent. of the outward business, and the Eastern route 33 per cent.

The length of submarine cable in use in the Dominion, apart from ocean-cable services, is 416 knots.

Aerial Services.

Aerial transport of mails in New Zealand is as yet in the experimental stages only. Trial mail-carrying flights were successfully carried out from Auckland to Dargaville, Whangarei, Thames, and Whakatane.

Staff.

The huge volume and multifarious business of the Post and Telegraph Department entails the employment of a numerous staff. The Secretary and the Chief Telegraph Engineer, under the Ministerial control of the Postmaster-General, are the administrative heads.

A return of the staff as at 31st March, 1920, is as follows:—

	31st March, 1920.
Classified staff,—	
Permanent	7,662
Temporary	742
Total	8,404
Employees not on classified staff	2,393
Grand total	10,797

Receipts and Expenditure.

The receipts and payments of the Post and Telegraph Department for the financial year 1919–20 are shown in the following table:—

Receipts.

Item.	Postal.	Telegraph.	Total.
	£	£	£
Postages	1,013,026	..	1,013,026
Money-order and postal-note commission	32,361	..	32,361
Money-order commission received from foreign offices	854	..	854
Private box and bag rents	20,347	..	20,347
Miscellaneous receipts	1,901	14,967	16,869
Paid telegrams	..	604,221	604,221
Telephone exchanges	..	419,318	419,317
Totals	1,068,489	1,038,506	2,106,995

Payments.

Item.	Postal.	Telegraph.	Total.
	£	£	£
Salaries (classified officers)	391,964	659,361	1,051,325
Salaries (country Postmasters and telephonists, and contributions to Railway Department)	24,647	38,174	62,821
Conveyance of mails by sea	53,812	..	53,812
Conveyance of inland mails	144,131	..	144,131
Conveyance of mails by railway	79,017	..	79,017
Money-order commission credited to foreign offices	2,667	..	2,667
Maintenance of telegraph and telephone lines	..	162,069	162,069
Miscellaneous	168,962	219,357	388,319
Totals	865,200	1,078,961	1,944,161
Balance of receipts over payments	203,289	40,455*	162,834

* Balance of payments over receipts.

Scope of Service.

In addition to its ordinary business, the Post and Telegraph Department performs an enormous amount of work for almost every other Department of State. The monetary value of this business reaches many millions of pounds annually, and the operations range from the receipt of land- and income-tax payments (£4,506,748) to the sale of fishing licenses (£1,580), and from the payment of pensions (£2,580,469) to the performance of marriage ceremonies.

SECTION XV.—LAND TENURE, SETTLEMENT, ETC.

SUBSECTION A.—CROWN LANDS.

ADMINISTRATION.

THE Crown lands are administered under the authority of the Land Act, 1908, by the Minister of Lands at Wellington, his executive officer being the Under-Secretary of Lands, who is the permanent head of the Department of Lands and Survey. New Zealand is divided into eleven land districts, each being under the local direction of a Commissioner of Crown Lands and a Land Board. The Commissioner's office is known as the principal land office, and in some of the larger districts there are one or more local land offices. It is with these land offices the selector has to transact all business, from the first consultation of the maps to the final receipt of the Crown title.

The names of the land districts and of the towns where the principal office of each is situated are as under:—

Land District.	Principal Land Office situated at	Land District.	Principal Land Office situated at
North Auckland ..	Auckland.	Marlborough ..	Blenheim.
Auckland ..	,,	Westland	Hokitika.
Taranaki ..	New Plymouth.	Canterbury ..	Christchurch.
Hawke's Bay ..	Napier.	Otago	Dunedin.
Wellington ..	Wellington.	Southland	Invercargill.
Nelson	Nelson.		

Commissioners of Crown Lands are executive officers of the land districts, having large discretionary powers under the Act. Each is the Chairman of the Land Board of his district, and transacts all its routine business in the sale, letting, and occupation of Crown lands. The Commissioners deal with trespassers and intruders (persons and cattle), removing the former and prosecuting the owners of the latter; they recover all penalties, ascertain the boundaries of Crown lands, enforce all contracts for the disposition of Crown lands, recover rents and other moneys, deal with determinable contracts, prosecute and defend suits, and do whatever is necessary in the course of their duties. They are also Conservators of State Forests for their respective land districts.

LAND BOARD.

A Land Board consists of five members—viz., the Commissioner of Crown Lands for the district (who is *ex officio* Chairman), three members nominated by the Governor-General, and one member elected by the Crown tenants of the district.

The Boards transact all business connected with the sale, letting, disposal, and occupation of Crown lands, and all matters connected with the management and control of the public lands in their hands. They are the sole judges of the fulfilment of conditions in leases and licenses, and they can declare them forfeit. All meetings are open to the Press and public, with certain limitations.

Applications for Land.

A selector may purchase for cash, or may select for occupation with right of purchase or for renewable lease. Every applicant must be of the age of seventeen years or upwards, and must apply for Crown land solely for his own use and benefit, and not directly or indirectly for the use or benefit of any other person, whilst, including the land he applies for, he is not to be the owner, holder, or occupier under any tenure of more than one year's duration, either severally or jointly or in common with any other person or persons, of any land anywhere in New Zealand exceeding in the whole 5,000 acres of land, computed as follows:—

(*a.*) Every acre of first-class land is reckoned as 7½ acres;
(*b.*) Every acre of second-class land is reckoned as 2½ acres;
(*c.*) Every acre of third-class land is reckoned as 1 acre.

The annual rental payable for occupation-with-right-of-purchase selections is 5 per cent. on the cash price of the land, and for lands selected for renewable lease the annual rental is 4 per cent. on the cash price of the land.

Methods of acquiring Crown Land.

Crown land may be selected and occupied under the following tenures and systems:—

(1.) Town, suburban, and village lands—
  (*a.*) For cash, by public auction;
  (*b.*) By lease for terms up to ten years;
  (*c.*) By renewable lease for thirty-three years.
(2.) Rural land (unimproved), (under optional system)—
  (*a.*) For cash, by application;
  (*b.*) Occupation with right of purchase for twenty-five years;
  (*c.*) Renewable lease for sixty-six years.
(3.) Village settlements—
  Under the three foregoing tenures of optional system.
(4.) Improved-farm settlements (rural land)—
  Under special conditions, and either (*a*) on occupation-with-right-of-purchase license or (*b*) on renewable lease.
(5.) Special settlements (rural land)—
  On renewable lease for sixty-six years and under special regulations.
(6.) Land-for-settlement estates (improved rural and pastoral land)—
  Under renewable lease for thirty-three years, with limited right to acquire freehold.
(7.) Pastoral land—
  (*a.*) By small-grazing-run lease for twenty-one years, with right of renewal (maximum area, 20,000 acres);
  (*b.*) By pastoral license on terms up to twenty-one years, as follows: (*a*) Pastoral lands suitable exclusively for pasturage, and not capable of being used with profit in areas of a carrying-capacity of less than 5,000 sheep; and (*b*) pastoral agricultural lands, with areas not exceeding 5,000 acres.
(8.) Land within mining districts—
  (*a.*) On pastoral licenses under special regulations, with right to acquire the freehold or exchange to a renewable lease;
  (*b.*) On occupation leases under special regulations, with similar rights as to purchase of freehold and exchange.

(9.) Miscellaneous—
(*a.*) Temporary occupation on terms up to five years;
(*b.*) Sale, or occupation, for special purposes;
(*c.*) Outlying land.

Conditions of Occupation and Leases.

Full particulars are given in the Crown Lands Guide, issued periodically and obtainable at any Land Office, as to the conditions of lease and occupation. A certain amount of improvements is required to be effected on rural land purchased for cash, or held under occupation-with-right-of-purchase or renewable-lease tenures, and residence is compulsory for certain periods on many Crown leaseholds. Rebate of rent is given in many cases when the half-yearly instalment of rent is paid within thirty days of its becoming due. Applications for mortgage, transfer, and sublease of a Crown leasehold have to be approved by the Land Board of the district in most cases.

Disposal of Endowments and Reserves administered by Land Boards.

National Endowments may be disposed of under renewable lease, small-grazing-run lease, or pastoral license. These lands are occupied on the same conditions as ordinary Crown lands, with the exception that the freehold cannot be acquired while such lands continue to be included in the endowment under section 11 of the Land Laws Amendment Act, 1920. The Governor-General is authorized to remove from the endowment certain lands comprised therein, including lands occupied by discharged soldiers under any tenure, and small grazing-runs held under leases issued under the Land Act, 1892, or the Land Act, 1908, up till 10th December, 1918. Upon the removal of such lands from the endowment the occupiers thereof can acquire the freehold in manner prescribed by section 11 of the Land Laws Amendment Act, 1920.

Education Endowments are available for leasing under the Education Reserves Amendment Act, 1910, modifying the Education Reserves Act, 1908, which permits of a lease being granted under the Public Bodies' Leases Act, 1908, as well as under the Land Act, 1908. The freehold of the land cannot be acquired.

Public Reserves not vested in trustees or a local authority may be leased under the Public Reserves and Domains Amendment Act, 1911, for any term not exceeding twenty-one years, with right of renewal for a further term. The freehold of the land cannot be acquired.

Lands opened for Selection.

During the year ended 31st March, 1920, an area of 133,287 acres of land was offered for selection under the various tenures provided by the Land Act, Land for Settlements Act, and Education Reserves Acts.

Under the optional system an area of 8,195 acres was advertised.

Under renewable lease an area of 5,648 acres was offered, 5,031 acres being settlement land of which the lessees have the right to acquire the freehold, and 617 acres national endowment. The pastoral-run area comprised 90,000 acres.

In addition to the above a total area of 883,301 acres of Crown, settlement, and national-endowment lands was set apart for selection by discharged soldiers under the ordinary tenures of the Land Act and the Land for Settlements Act, and the special tenures of the Discharged Soldiers Settlement Act. Fuller particulars regarding these lands will be found at the end of this subsection.

The total selections during the year covered an area of 801,877 acres, by 1,825 selectors. These figures include, however, 253 purchases of small town, suburban, and rural lands, aggregating 3,957 acres, offered for sale at auction. The ordinary Crown lands holdings represented 368,452 acres; land for settlements and Cheviot Estate, 91,395 acres; national endowment, 324,717 acres; and educational, 13,356 acres. Selections by discharged soldiers are included in the foregoing totals.

Selections under Settlement Conditions.

Areas under this heading include all lands sold for cash or selected on the deferred-payment system, small grazing-runs, and leases under the following tenures: Renewable lease, occupation with right of purchase, mining districts land occupation leases, education-endowment leases, and pastoral licenses in mining districts under special regulations.

A five years' summary is as follows:—

Year ended 31st March.	Sold for Cash.	Deferred-payment Licenses.	Leases and Licenses (Ordinary Settlement).	Small Grazing-runs.	Totals.
1916	319	11	884	12	1,226
1917	313	37	868	16	1,234
1918	180	14	708	5	907
1919	127	44	573	1	745
1920	253	94	1,007	11	1,365

The acreage represented by the selections included in the foregoing table is as follows:—

Year ended 31st March.	Sold for Cash.	Deferred-payment Licenses.	Leases and Licenses (Ordinary Settlement).	Small Grazing-runs.	Totals.
	Acres.	Acres.	Acres.	Acres.	Acres.
1916	7,097	486	251,822	150,514	409,919
1917	5,414	680	231,477	135,691	373,262
1918	4,696	992	151,854	31,093	188,635
1919	2,225	632	136,754	2,532	142,143
1920	3,957	2,110	247,925	128,437	382,429

CROWN LAND HELD OR MADE FREEHOLD.

The following table shows in a condensed form the area of Crown land held at 31st March, 1920, the yearly rental payable, and the area made freehold :—

Tenure.	Total Number of Selectors.	Total Area held.	Total Yearly Rental or Instalment Payable.	Total Area made Freehold.	
				Number of Purchasers.	Area.
		Acres.	£		Acres.
Cash lands	..	..	..	..	13,196,536
Deferred payment ..	1,157	247,242	47,034	9,981	1,179,497
Perpetual lease ..	290	24,688	1,410	2,988	843,674
Occupation with right of purchase	4,947	1,507,814	115,527	3,488	949,234
Lease in perpetuity ..	8,167	1,752,876	202,960	2,463	456,438
Renewable lease ..	5,875	1,744,903	420,231	249	31,175
Agricultural lease ..	12	319	14	1,358	134,326
Mining districts land occupation leases	700	21,830	1,528	55	2,091
Pastoral licenses in mining districts under special regulations	921	224,596	5,318	7	829
Small grazing-runs ..	860	2,740,032	97,324	33	40,763
Pastoral runs	667	10,174,236	157,431	..	..
Miscellaneous leases and licenses	6,475	1,348,030	37,641	..	..
Totals	30,071	19,786,566	1,086,418	20,622	16,834,563
Thermal-spring leases (Rotorua)	325	3,362	2,061	..	..
Education endowments—					
Primary	3,191	764,751	94,339	3	86
Secondary	407	38,777	6,833	..	..
Totals	3,598	803,528	101,172	3	86
Grand totals ..	33,994	20,593,456	1,189,651	20,625	16,834,649
Other endowment lands..	749	353,148	16,325	4	5,019

SUBDIVISION OF LAND.

Much of the land legislation of recent years has been in the direction of preventing large areas of good land from being acquired or retained by a single individual. The Land Laws Amendment Acts of 1912 and 1913 went further in the direction of encouraging or compelling subdivision of land held in large areas. Part III of the Land Laws Amendment Act, 1912, makes provision for agreements between the Minister of Lands and the owner in fee-simple of any land for the subdivision of that land, and for the disposal by public tender of the allotments by way of sale or by way of lease with right of purchase.

Section 49 provides for similar agreements between the Minister and the owners of Native freehold land in respect of the disposition by sale or lease of that land.

In Part VI of the Land Laws Amendment Act, 1913, provision is made whereby the Minister of Lands may at any time in writing notify an owner of land that such land or a portion thereof is required for purposes of settlement. The owner of land is required, within six months after such notice has been gazetted, to notify the Minister whether he elects (*a*) to himself subdivide and offer the land for sale in subdivisions, or (*b*) to enter into an agreement with the Minister as above, or (*c*) that the land shall be taken compulsorily under the Land for Settlements Act.

In Part VII of the Land Laws Amendment Act, 1913, provision is made for compulsorily taking private land (not within a borough or town district) in cases where in the opinion of the Board of Land Purchase Commissioners such land has been acquired by way of aggregation, and where such aggregation is contrary to the public interest. Compensation is payable for all land so taken.

Land for Settlements.

The number of estates offered during the year was less than that for the previous one, being 461, of an acreage of 619,680 acres. The whole was considered for soldier settlements. The area purchased and completed is 176,836 acres, of a value of £1,929,435. Besides there was purchased for individual soldiers 25,061 acres, of a value of £423,017. Further areas were purchased but not yet taken over—viz., 47,235 acres, valued at £583,281, for ballot, and 16,814 acres, valued at £403,466, for individual soldiers. The areas dealt with show a large increase on previous years.

Amongst the areas secured is part of the Hill Springs Estate, adjoining Teviot—9,820 acres, with 28,600 of Crown leasehold given in.

The general demand for land, especially for dairying and grazing, is extremely keen, and prices are being paid for properties far beyond what the members of the Boards feel they can safely recommend. A large number of the places offered present insuperable difficulties in the way of roading and subdividing into reasonable areas, and the want of suitable homestead-sites.

A table is given showing for each land district the number and area of estates purchased to the 31st March, 1920, together with information as to purchase-money and incidental expenses.

Summary of Estates acquired up to the 31st March, 1920.

Land District.	Number.	Area.	Purchase-money.	Incidental Expenses, Improvements, Roads, &c.
		Acres.	£	£
Auckland	84	375,203	1,303,919	122,191
Hawke's Bay ..	53	289,339	2,047,328	115,571
Taranaki	18	18,214	264,545	12,953
Wellington	115	135,455	1,689,331	98,201
Marlborough ..	17	217,709	687,838	62,071
Nelson	10	35,834	86,275	5,458
Westland	2	5,125	8,343	2,981
Canterbury	158	441,277	3,287,602	147,880
Otago	66	285,207	1,635,561	131,055
Southland	23	87,648	423,313	29,928
Totals ..	546	1,891,011	11,434,055	728,289

The transfer of certain areas from Crown to settlement lands, and the adjustment of areas to account for ascertained surpluses or deficiencies, brings the total area to 1,899,346 acres at the 31st March, 1920. Of this, 160,325 acres have been sold for cash or made freehold, the total purchase-money being £597,169; and 22,786 acres are occupied by roads or by reserves unlet. At the 31st March, 1920, 6,167 selectors were holding a total of 631,163 acres, the annual rental for which amounts to £62,941; and the remaining 84,869 acres were unlet. The figures for each land district are as follows:—

POSITION OF LAND FOR SETTLEMENTS AT THE 31ST MARCH, 1920.

District.	Net Area acquired, including ascertained Surplus.	Area occupied by Roads and Reserves unlet.	Area of Land unlet, including Land forfeited, surrendered, or resumed and not relet, and also Land not yet offered for Selection.	Total Area purchased for Cash or made Freehold to Date.		
				Number of Purchasers.	Area.	Price realized.
	Acres.	Acres.	Acres.		Acres.	£
North Auckland	31,828	636	2,506	143	1,349	17,564
Auckland ..	310,371	6,715	74,772	502	100,629	206,240
Hawke's Bay..	249,304	2,623	..	100	18,852	114,522
Taranaki ..	9,532	90	155	20	1,052	24,240
Wellington ..	102,501	910	399	97	6,792	71,161
Nelson ..	39,388	855	1,469	5	966	2,153
Marlborough ..	228,358	2,683	740	28	4,557	15,650
Westland ..	3,230	66	..	2	192	116
Canterbury ..	582,935	4,427	931	174	12,833	96,069
Otago ..	247,732	2,811	3,265	36	4,976	22,599
Southland ..	94,167	970	632	58	8,127	26,855
Totals ..	1,899,346	22,786	84,869	1,165	160,325	597,169

District.	Total Lands leased to Date.			Rent and other Payments received during the Year.	Total Receipts from Inception to 31st March, 1920.
	Number of Selectors.	Area.	Annual Rental.		
		Acres.	£	£	£
North Auckland	215	27,337	10,262	7,785	77,051
Auckland	807	128,255	32,905	66,526	544,405
Hawke's Bay	713	227,828	81,141	109,646	1,178,347
Taranaki	93	8,235	6,683	7,739	72,427
Wellington	673	94,400	56,330	62,617	300,046
Nelson	47	36,097	3,679	3,392	28,652
Marlborough	470	220,187	33,147	33,306	438,422
Westland	22	2,972	268	540	10,362
Canterbury	1,800	564,744	153,771	162,512	1,909,320
Otago	1,006	236,670	65,424	67,508	873,151
Southland	321	84,438	19,331	22,916	253,300
Totals	6,167	1,631,163	462,941	544,487	4,685,483

The Land for Settlements Account at the 31st March, 1920, stands as under :—

Receipts.	£	s.	d.	*Payments.*	£	s.	d.
Loans current ..	8,966,487	0	0	Purchase-money ..	9,981,738	5	5
Rents, &c., received	5,232,378	17	5	Incidental expenses	821,278	19	3
Sales of settlement lands	786,763	9	9	Interest	4,318,928	6	11
Sales of workers' dwellings ..	43,180	12	8	Sinking fund ..	663,496	8	0
Receipts under Land Act, section 191..	8,782	7	10	Land Laws Amendment Act, section 63	280,171	0	0
Receipts under Land Act, section 177..	59,700	17	1	Balance	156,668	1	4
Sale of Crown lands	1,085,898	17	7				
Interest on investments	26,341	15	10				
Recoveries ..	1,303	18	10				
Premium on loan ..	117	0	0				
Four-per-cent. stock created to cover expenses of raising loan	349	0	0				
Receipts on account of Teviot for year	10,977	3	11				
	£16,222,281	0	11		£16,222,281	0	11

Land-settlement Finance Associations.

On the 1st January, 1910, the Land Settlement Finance Act, which is described fully in the 1915 issue of this book, came into force. The associations incorporated now number forty-six.

Land for Discharged Soldiers.

Under the provisions of the Discharged Soldiers Settlement Act, 1915 and amendments, any person is entitled to the benefits of the Act who has been a member of a New Zealand Naval or Expeditionary Force, has served beyond New Zealand in connection with the present war, has returned to New Zealand, and has received an honourable discharge, together with any person who immediately prior to the commencement of the present war was a *bona fide* resident of New Zealand, and has also served during the present war with some portion of His Majesty's Naval or Military Forces (not being Forces raised in New Zealand), and has received an honourable discharge therefrom. In addition, all discharged members of an Expeditionary Force who, having been classed as medically fit for service beyond the seas, have served as members of that Force in a camp of military training and remained attached to that camp on the 12th November, 1918 (being the date of the cessation of hostilities with Germany), are entitled to apply for advances or private land under sections 2 or 3 of the Discharged Soldiers Settlement Amendment Act, 1917. (See paragraphs headed "Private Land" and "Financial Assistance.")

Any discharged soldier wishing to take up land should obtain a provisional application form, answer the questions thereon, and forward it to the Commissioner of Crown Lands for the land district in which he desires to settle. Provisional application forms may be obtained at any land office or from the Discharged Soldiers' Information Department, Wellington. On receipt of a provisional application the Commissioner will supply the applicant with information regarding all available Crown lands in his land district, and the Land Board will endeavour to place the applicant on a suitable holding.

TENURES UNDER WHICH LAND MAY BE SELECTED.

There is power to dispose of land under the ordinary tenures of the Land Act, 1908, and the Land for Settlements Act, 1908—*i.e.*, for cash, or occupation with right of purchase, or on renewable lease under the former Act, and renewable lease under the latter Act, also under the "special tenures" of the Discharged Soldiers Settlement Act, 1915, which are cash, deferred payment, or a renewable lease with a purchasing clause. The various tenures mentioned may be explained as under, and are given under two headings—viz., "Ordinary Tenures" and "Special Tenures."

(A.) *Ordinary Tenures.*

Cash.—In all cases of purchase of land for cash the applicant is required to pay one-fifth of the purchase-money at the date of the sale, and the balance, with the Crown-grant fee, within thirty days from the date of the approval of the application.

Occupation with Right of Purchase.—Term, twenty-five years; rental, 5 per cent. on the capital value of the land; right of purchase after the license has been held six years, provided the residence and improvement conditions have been complied with. If the licensee does not acquire the freehold prior to the expiration of the term of twenty-five years he has a prior right to a renewable lease.

Renewable Lease under the Land Act.—Term, sixty-six years, with a perpetual right of renewal; rental, 4 per cent. on the capital value of the land. Land selected under this tenure immediately becomes national endowment, and there is no right to the freehold.

Renewable Lease under the Land for Settlements Act.—Term, thirty-three years, with perpetual right of renewal; rental, 4½ per cent. on the capital value of the land. Right of purchase at any time during the currency of the lease. Purchase of the freehold may be made on the deferred-payment system if desired.

(B.) *Special Tenures.*

Cash.—The remarks already made under "Cash" heading apply to cash selections under "Special Tenures."

Deferred Payment under Special Tenures.—Term, twenty years; licensee to deposit 5 per cent. of the purchase-money, and thereafter pay the balance

of 95 per cent. by equal annual payments, together with interest at 5 per cent., payable half-yearly, on all outstanding balances. The licensee has the right to pay off the whole or any part of the outstanding money at any time during the currency of the license.

Renewable Lease with Purchasing Clause under Special Tenures. — Term may be for any period not exceeding thirty-three years in the case of settlement land, and sixty-six years in the case of Crown land, with perpetual rights of renewal for thirty-three years or sixty-six years as the case may be. Freehold may be acquired any time during the currency of the lease. Purchase of the freehold may be made on the deferred-payment system if desired.

Private Land.

Under section 3 of the Discharged Soldiers Settlement Amendment Act, 1917, one or more discharged soldiers may apply to the Land Board with a view to the acquisition by the Crown on their behalf of any private land. The Land Board, however, cannot deal with such application until an offer in writing to sell the land to the Crown has been submitted to the Board by the owner of the land. It can then consider the application and offer, and forward them to the Minister of Lands with such recommendations as it thinks proper. The Minister may thereupon refer the offer to the Land Purchase Board for consideration, and if the land or any part thereof is acquired by the Crown, it may then be disposed of under the Discharged Soldiers Settlement Act to the applicant. (See also under heading of "Financial Assistance.")

Soldiers' Dwellings.

The Minister may set land apart for the purpose of soldiers' dwellings, and may erect suitable buildings thereon. The land and dwellings may then be disposed of to discharged soldiers in the same manner generally as in the case of workers by the Workers' Dwellings Act, 1910.

Transfers.

No transfer of land selected under the Discharged Soldiers Settlement Act will be permitted for a period of ten years, except with the approval of the Land Board and the Minister of Lands.

Financial Assistance.

Section 2 of the Discharged Soldiers Settlement Amendment Act, 1917, provides that financial assistance may be given to discharged soldiers for the following purposes: (*a*) The purchase of private or Native land; (*b*) the acquisition by assignment or transfer of the lease of any land; and (c) the discharge of any mortgage affecting any land owned by a discharged soldier or held by him under license or lease from a Land Board. The maximum

amount for any of these purposes that may be advanced to any one person is £2,500, with a further advance of £750 for improvements, stock, &c., where necessary. Repayment of advances may be secured by flat mortgage for ten years, with interest at 5 per cent., or by instalmennt mortgage extending over a period of thirty-six years and a half, with an annual charge of 6 per cent., which includes interest and sinking fund.

If assistance is required for the purchase of a residential site with dwelling thereon, an advance not exceeding £1,000 may be made, or, in the event of the site being owned by the applicant, an advance not exceeding £900 may be made towards the erection of a dwelling thereon. Repayment of advances may be secured by flat mortgage for ten years, with interest at 5 per cent., or by instalment mortgage extending over a period of twenty-five years and a half, with an annual charge of 7 per cent., which includes interest and sinking fund.

Valuation fees are payable with applications.

In addition, financial assistance may be given to discharged soldiers who own freehold land or are the lessees or licensees of any land administered by a Land Board, for any of the following purposes: The clearing, fencing, draining, and general improvement (including erection of buildings) of the land, and the purchase of plant, stock, implements, seeds, trees, &c. Except in the case of a house to be built on other than rural land, the maximum total amount that may be advanced for all the foregoing purposes is £500 (not more than £250 of this being for a dwelling and other buildings) unless there be special circumstances in which the amount would be inadequate, when the Minister may authorize an additional advance not exceeding £250.

Advances are secured by a first mortgage over the land, with the addition, at the option of the Minister, of a bill of sale over the stock implements, &c. The rate of interest is 5 per cent.

Advances for improvements or buildings may be made by progress-payments up to 75 per cent. of the value of any work done.

Applications for assistance, giving full particulars, must be made to the Land Board for the district in which the land affected is situated. Before making its recommendation the Board will require the applicant to appear personally before it, or before such person as it may appoint. No application for an advance to assist in the purchase of land can be considered unless accompanied by an option to purchase the fee-simple, or lease, or license, as the case may be.

At the 31st March, 1920, advances amounting to £12,610,254, to 12,415 settlers, had been authorized. Advances actually made to the same date reached a total of £8,859,173, of which £178,398 has already been repaid.

The following table shows the total area proclaimed under the Discharged Soldiers Settlement Act, 1915. Of the total area proclaimed, ordinary Crown lands amounted to 365,092 acres, Cheviot Estate to 3,356 acres, land for settlements to 198,815 acres, and national-endowment land to 316,038 acres.

District.	Under Section 3 of the Act. (Ordinary Tenures.)		Under Section 4 of the Act. (Special Tenures.)		Total Area proclaimed.	
	For the Year ended 31st March, 1920.	Total to 31st March, 1920.	For the Year ended 31st March, 1920.	Total to 31st March, 1920.	For the Year ended 31st March, 1920.	Total to 31st March, 1920.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
North Auckland	13,709	13,709	13,520	13,520	27,229	27,229
Auckland ..	6,638	40,611	23,317	85,291	29,955	125,902
Hawke's Bay ..	2,846	16,658	30,434	101,369	33,280	118,027
Taranaki ..	597	11,562	9,272	16,968	9,869	28,530
Wellington ..	..	1,591	11,440	86,459	11,440	88,050
Nelson ..	2,856	26,086	4,351	8,137	7,207	34,223
Marlborough ..	..	..	1,910	12,930	1,910	12,930
Westland ..	..	11,186	..	480	..	11,666
Canterbury ..	154,727	233,028	19,092	27,124	173,819	260,152
Otago ..	65,893	118,377	9,212	36,450	75,105	154,827
Southland ..	2,836	10,140	4,028	11,625	6,864	21,765
Totals ..	250,102	482,948	126,576	400,353	376,678	883,301

During the year ended 31st March, 1920, 5,041 applications were made under the provisions of the Discharged Soldiers Settlement Act, and allotments were made in the case of 932 applicants. The following table shows the number of applications for land in each of the several land districts of the Dominion, and also the number of applications granted, together with the areas so allotted:—

District.	Applications.	Allotments	
		Number.	Area.
			Acres.
North Auckland	200	113	27,082
Auckland	440	226	41,439
Hawke's Bay	740	80	31,730
Taranaki	132	33	11,053
Wellington	575	227	39,574
Nelson	17	11	11,136
Marlborough	43	10	2,879
Westland	16	10	3,611
Canterbury	1,998	119	187,947
Otago	796	58	33,413
Southland	84	45	14,027
Totals	5,041	932	403,891

SECTION XV.—LAND TENURE, SETTLEMENT, ETC.—*continued.*

SUBSECTION B.—NATIVE LANDS.

NATIVE lands and Native affairs generally are administered by the Native Department as indicated below.

The Native Land Court is the Court of Record of Titles, and deals, *inter alia*, with the partition and exchange of Native lands, succession, probate and letters of administration, consolidation of interests, incorporation of owners, and alienation.

Maori Land Boards, of which there are seven, all located in the North Island, are concerned with the confirmation and approval of alienations, the administration of Native lands by way of sale or lease, and the administration of estates as farms.

The Registrars of the Native Land Courts are also the administrative officers of the Maori Land Boards of the various districts.

The purchase of lands on behalf of the Crown is conducted by a Native Land Purchase Board.

Maori Councils elected for defined districts, and composed of Natives, supervise matters generally affecting the Maori settlements and kaingas, more particularly as regards sanitary arrangements.

The terms "partition" and "individualization" as applied to Native Land Court dealings are often confused. To individualize is to partition in severalty, and not merely to define relative interests, which may be done without further partition. To partition is to cut out certain interests in a block of land, and may not necessarily be for an individual. The term "customary land," which is also sometimes misunderstood, is applied to land not yet clothed with a Native Land Court title. Customary land was formerly known as papatupu land.

NATIVE LAND COURT.

Particulars of the business dealt with by the Native Land Court during the twelve months ended 31st March, 1920, are as follows:—

Number of sittings	169
Number of cases notified	28,954
Number of cases for which orders were made .. .	10,399
Number of cases dismissed	3,000
Number of cases adjourned *sine die*	15,834
Number of partitions made	904
Area affected (acres)	358,791
Number of investigations of title	11
Area affected (acres)	557
Number of succession orders made	8,511
Number of other orders made	2,386

From the Native Land Court an appeal lies to the Native Appellate Court.

Maori Land Boards.

The total area vested in and administered by the various Maori Land Boards at 31st March, 1920, was 942,632 acres.

During the year 1,021 acres of vested land were disposed of by lease, as against 1,024 acres by lease and 4,733 acres by sale in the previous year.

With regard to Native freehold land, the Boards during the year approved of 405 leases, comprising 39,246 acres, and confirmed 1,248 transfers (apart from sales to the Crown) affecting 103,306 acres of freehold land.

Native-land Purchase.

During the year some 107 blocks, comprising 75,119 acres, were proclaimed Crown land. The actual purchases made during the year totalled an area of 121,176 acres. In the Urewera Reserve an area of 29,996 acres was secured, making the Crown purchases in the Urewera total 320,578 acres as at the 31st March last.

During the ten years which have elapsed since the coming into operation of the Native Land Act, 1909, the total area of Native land alienated by way of sale has been approximately 2,380,000 acres. Of this total an area of some 1,076,570 acres has been acquired on behalf of the Crown for settlement purposes, at a purchase-price of £2,505,473.

Extent of Native Lands.

The total area of lands held by Maori owners at 31st March, 1920, was 5,066,197 acres, of which 4,787,686 acres were situated in the North Island. Dealing with the North Island only, the position was:—

	Acres.
Leased through Maori Land Boards	2,810,637
Leased and farmed by East Coast Trust Commissioner	158,432
Leased by Public Trustee	151,801
Leased under special enactments	9,538
Occupied by Maori owners (estimated)	380,000
Unoccupied	1,277,278
Total	4,787,686

A high proportion of the unoccupied land consists of pumice land, mountain-tops, sand-dunes, &c. The position is briefly that there is barely sufficient Native land for the requirements of the Natives themselves.

SECTION XV.—LAND TENURE, SETTLEMENT, ETC.—*continued.*

SUBSECTION C.—LAND TRANSFER AND DEEDS REGISTRATION.

Prior to 1870 conveyancing in New Zealand was based upon the English laws of real property as existing at the date of the constitution of the colony, varied in some important particulars by the Conveyancing Ordinance of 1842 and other colonial legislation, now embodied in the Property Law Act, 1908. Considerable areas of land in all parts of the Dominion are still held and dealt with under this system. Although provision is made for the registration of deeds affecting such land, registration is no guarantee of their validity, and a purchaser has to rely for the security of his title upon the skill and care of his legal adviser.

By the Land Transfer Act, 1870, the system of title by registration was introduced. The title to land under this system is not affected by the execution of documents. Registration is the fundamental principle, and it is only on registration that any interest passes. The Land Transfer Department assumes all responsibility for the registration, and any person named in the register as taking an interest under a registered instrument acquires a practically indefeasible title.

Deeds Registration.

Provision has existed since 1841 and is now contained in the Deeds Registration Act, 1908, for the registration of deeds and instruments affecting land which is not subject to the provisions of the Land Transfer Act. Registration is not essential to the validity of the instrument, but it is highly important as a record and to secure priority. The Act provides that every deed shall be void as against any person claiming for valuable consideration under any subsequent deed duly registered unless the earlier deed was registered before the subsequent one. The Department is not responsible for the form or matter of the instruments registered beyond seeing that they are duly stamped and contain a sufficient description of the land to identify it.

Provision is made for the deposit of instruments in the Deeds Registry Office for safe custody and reference, and such deposit operates as a release from any covenant for production.

The Deeds Index and all recorded and deposited instruments are open to public inspection, and certified copies may be obtained on payment of the prescribed fees.

Year ended 31st March.	Deeds recorded.	Fees. £	Year ended 31st March.	Deeds recorded.	Fees. £
1915 ..	15,716	15,133	1918 ..	13,673	13,226
1916 ..	15,348	15,429	1919 ..	12,798	13,148
1917 ..	15,664	14,371	1920 ..	24,650	25,157

Land Transfer.

The land-transfer system in New Zealand originated, as stated above, with the Land Transfer Act, 1870. This re-enacted with amendments is now the Land Transfer Act, 1915.

The land subject to the Land Transfer Act comprises all land alienated from the Crown since 1870, all land included in any order under the Native Land Acts vesting such land in any person in freehold tenure, and all land vested in any person in fee-simple by virtue of any Act of the General Assembly, besides land which has been brought under the Act on the application of the proprietors after investigation and acceptance of the title by the Department.

Full information concerning the land-transfer system is given in the 1914 and preceding issues of this book.

Information as to applications to bring land under the Land Transfer Act during each of the past five years is given in the next table.

Year ended 31st March.	Applications.			
	Number.	Area.		Value.
		Town and Suburban.	Country.	
		Acres.	Acres.	£
1916	428	185	64,914	1,215,552
1917	409	133	37,447	1,029,143
1918	316	99	89,388	965,089
1919	291	133	76,441	776,403
1920	497	175	85,237	1,343,243

The following table shows the number of certificates issued for the past ten years. Included in the totals are those certificates issued in lieu of Crown grants, 1,206 being the number for 1919-20.

CERTIFICATES OF TITLE ISSUED.

Year ended 31st March.	Number.	Year ended 31st March.	Number.
1911	11,645	1916..	10,525
1912	12,907	1917..	10,350
1913	13,075	1918..	10,230
1914	12,867	1919..	7,988
1915	11,074	1920..	11,637

The table next following shows transfers registered under the Land Transfer Act during each of the past five years:—

TRANSFERS REGISTERED.

Year ended 31st March.	Number.	Area.		Consideration-money.
		Town and Suburban.	Country.	
		Acres.	Acres.	£
1915..	21,381	6,206	2,129,973	17,206,248
1916..	22,394	7,073	2,414,007	22,264,623
1917..	22,187	79,316	2,676,691	34,288,831
1918..	19,949	6,156	2,008,370	18,083,634
1919..	22,496	21,156	1,992,312	25,197,384

MORTGAGES.

One of the most notable differences between the present system of land-transfer and the former is in respect of the form of a mortgage. Under the old system the mortgagor conveyed the land to the mortgagee subject to a right to a reconveyance or "equity of redemption" on repayment of the money. Under the Act no transfer of the property takes place, but a charge only is created, the mortgagee being specially empowered to sell the land in the event of default being made in payment. A simple receipt by the mortgagee for the amount secured releases the land from the encumbrance. Provision is made, similar to that contained in the Property Law Act, for sale through the Registrar of the Supreme Court in the event of the mortgagee desiring to buy in the mortgaged land.

MORTGAGES REGISTERED UNDER LAND TRANSFER ACT.

Year ended 31st March.	Number.	Area.		Amount secured.
		Town and Suburban.	Country.	
		Acres.	Acres.	£
1916	20,545	4,872	4,608,014	18,428,772
1917	18,803	4,342	3,714,395	17,604,524
1918	15,899	4,118	3,559,517	14,879,640
1919	16,069	18,742	2,830,260	15,891,277
1920	35,632	43,398	6,050,551	40,670,049

In regard to mortgages under the Land Transfer Act, a table is added showing the total amount remaining secured by such mortgages on the 31st March, 1920.

District.	Amount.	District.	Amount.
	£		£
Auckland	33,069,405	Marlborough ..	2,664,143
Taranaki	13,897,481	Canterbury ..	28,186,325
Wellington	39,445,373	Otago	8,629,073
Hawke's Bay ..	15,616,311	Southland	9,668,655
Poverty Bay	6,493,976	Westland	571,297
Nelson	2,909,701	Total ..	161,151,740

The total, £161,151,740, represents a net increase of £21,404,574 during the year, the amount of mortgages paid off since 1st April, 1919, being £19,265,475, as against mortgages registered amounting to £40,670,049, shown above.

In addition to the mortgages under the Land Transfer Act, a considerable number are registered under the Deeds Registration Act. During the year ended the 31st March, 1920, the total mortgages registered were 42,664, representing £48,442,900, so that the registrations of mortgages under the Deeds Registration Act numbered 7,032, for an amount of £7,772,851.

The total amount represented by the mortgages on the register under the Land Transfer and Deeds Registration Acts on the 1st April, 1920, was £172,106,789, as compared with £146,750,636 a year previous.

It should be explained that the amounts quoted in respect of mortgages do not represent the true amounts of advances secured by deed. In cases where the property mortgaged is situated in more than one registration district the deed is registered for the full amount in each district, and thus there is some degree of duplication. On the other hand, mortgages are not all registered, those given in security for temporary loans, stock and crop liens, bills of sale, and chattels—transfers not being included in the figures.

Classified according to the various rates of interest, the amounts in the mortgage-deeds registered during 1919-20 are compared with the last pre war year, 1913-14:—

Rate per Cent.	1913-14.	1919-20.	Rate per Cent.	1913-14.	1919-20
	£	£		£	£
4 ..	78,053	54,937	7 .	1,128,676	1,432,412
4½ ..	325,487	84,826	7½ ..	199,653	201,078
5 ..	4,792,360	10,124,172	8 ..	814,164	1,199,160
5¼ ..	349,805	61,317	9 ..	64,279	139,696
5½ ..	3,968,897	13,409,139	10 ..	181,868	148,901
5¾ ..	176,044	713,436	Other and	2,153,767	2,826,533
6 ..	6,317,723	16,164,802	unspecified		
6½ .	801,919	1,882,491	Totals ..	21,352,695	48,442,900

SECTION XV.—LAND TENURE, SETTLEMENT, ETC.—*continued.*

SUBSECTION D.—OCCUPATION AND OWNERSHIP OF LAND.

Occupation of Land.

The total area of the Dominion, excluding Cook and other Pacific islands annexed in 1901, is 66,292,232 acres. Of this total, 43,473,079 acres were returned in 1920 as being in occupation, including reserves and Native lands leased, but excluding areas within borough boundaries and holdings of less than 1 acre in extent. Of the balance, it is estimated that 3,307,515 acres are barren and 2,244,564 occupied by lakes, rivers, and roads.

The numbers of holdings and percentages of total holdings in occupation in groups of sizes, as returned at the past five collections, are given below :—

Occupied Lands.—Holdings.

Area, in Acres.	Number of Holdings.					Percentages of Total.				
	1916.	1917.	1918.	1919.	1920.	1916.	1917.	1918.	1919.	1920.
(Inclusive) 1 to 10 ..	15,454	15,832	15,735	15,674	15,554	20·01	19·91	19·63	19·48	19·06
11 „ 50 ..	12,748	13,097	13,282	13,291	13,367	16·51	16·45	16·51	16·52	16·38
51 „ 100 ..	9,122	9,399	9,479	9,524	10,039	11·81	11·82	11·83	11·84	12·31
101 „ 200 ..	12,159	12,609	12,698	12,745	13,079	15·75	15·85	15·84	15·84	16·03
201 „ 320 ..	7,972	8,157	8,217	8,277	8,500	10·32	10·26	10·25	10·28	10·42
321 „ 640 ..	9,572	9,800	9,940	10,031	10,166	12·39	12·32	12·40	12·46	12·46
641 „ 1,000	3,895	4,022	4,120	4,133	4,080	5·04	5·06	5·14	5·13	5·00
1,001 „ 5,000	5,284	5,540	5,623	5,699	5,722	6·84	6·97	7·02	7·08	7·01
5,001 „ 10,000	517	562	565	562	550	0·67	0·71	0·71	0·70	0·67
10,001 „ 20,000	277	281	291	287	299	0·36	0·35	0·36	0·36	0·37
20,001 „ 50,000	165	173	185	183	174	0·21	0·22	0·23	0·23	0·21
Over 50,000 acres	64	64	61	62	62	0·09	0·08	0·08	0·08	0·08
Totals ..	77,229	79,536	80,146	80,468	81,592	100·00	100·00	100·00	100·00	100·00

The areas of holdings in occupation by size-groups, and the percentage each group represents of the total area in occupation, are now given.

Occupied Lands.—Areas.

Sizes of Holdings, in Acres.	Aggregate Area of Group (Acres).				
	1916.	1917.	1918.	1919.	1920.
(Inclusive) 1 to 10 ..	69,390	72,071	72,413	72,524	72,191
11 „ 50 ..	358,726	368,068	372,509	373,737	376,722
51 „ 100 ..	708,228	730,703	737,054	741,469	780,437
101 „ 200 ..	1,812,196	1,873,968	1,890,152	1,895,119	1,942,252
201 „ 320 ..	2,054,917	2,096,827	2,114,802	2,129,449	2,186,233
321 „ 640 ..	4,355,985	4,465,009	4,525,386	4,576,782	4,641,779
641 „ 1,000 ..	3,149,598	3,242,427	3,330,364	3,365,145	3,301,292
1,001 „ 5,000 ..	10,366,504	10,911,716	11,015,761	11,199,385	11,305,733
5,001 „ 10,000 ..	3,593,266	3,929,618	3,949,500	3,905,073	3,824,623
10,001 „ 20,000 ..	3,880,927	3,975,105	4,091,022	4,033,038	4,235,689
20,001 „ 50,000 ..	5,126,470	5,442,567	5,727,399	5,654,073	5,371,215
Over 50,000 acres ..	5,785,986	5,636,640	5,385,717	5,396,912	5,434,913
Totals ..	41,262,193	42,744,719	43,212,079	43,342,706	43,473,079

OCCUPIED LANDS.—AREAS—*continued.*

Sizes of Holdings, in Acres.	Percentage of Total Area occupied.				
	1916.	1917.	1918.	1919.	1920.
(Inclusive)					
1 to 10 ..	0·17	0·16	0·17	0·17	0·17
11 „ 50 ..	0·87	0·86	0·86	0·86	0·87
51 „ 100 ..	1·72	1·71	1·71	1·71	1·80
101 „ 200 ..	4·39	4·38	4·37	4·37	4·47
201 „ 320 ..	4·98	4·91	4·89	4·91	5·03
321 „ 640 ..	10·56	10·45	10·47	10·56	10·68
641 „ 1,000 ..	7·63	7·59	7·71	7·76	7·59
1,001 „ 5,000 ..	25·12	25·53	25·49	25·84	26·00
5,001 „ 10,000 ..	8·71	9·19	9·14	9·01	8·80
10,001 „ 20,000 ..	9·41	9·30	9·47	9·31	9·74
20,001 „ 50,000 ..	12·42	12·73	13·26	13·05	12·35
Over 50,000 acres ..	14·02	13·19	12·46	12·45	12·50
Totals ..	100·00	100·00	100·00	100·00	100·00

Taking the years 1916 and 1920 it is now possible to show the increase or decrease per cent. of numbers and areas of holdings according to size-groups.

OCCUPIED LANDS.—PERCENTAGES OF INCREASE OR DECREASE OF NUMBERS AND AREAS OF HOLDINGS BY SIZE-GROUPS.

Sizes of Holdings, in Acres.	1916. Per Cent. of Total.		1920. Per Cent. Increase or Decrease compared with 1916.	
	Number.	Area.	Number.	Area.
(Inclusive)				
1 to 10	20·01	0·17	−0·95	..
11 „ 50	16·51	0·87	−0·13	..
51 „ 100	11·81	1·72	+0·50	+0·08
101 „ 200	15·75	4·39	+0·28	+0·08
201 „ 320	10·32	4·98	+0·10	+0·05
321 „ 640	12·39	10·56	+0·07	+0·12
641 „ 1,000	5·04	7·63	−0·04	−0·04
1,001 „ 5,000	6·84	25·12	+0·17	+0·88
5,001 „ 10,000	0·67	8·71	..	+0·09
10,001 „ 20,000	0·36	9·41	+0·01	+0·33
20,001 „ 50,000	0·21	12·42	..	−0·07
Over 50,000 acres	0·09	14·02	−0·01	−1·52

Occupied Holdings.—Numbers and Average Areas.

The following table gives the numbers and average areas of holdings for each land district in the Dominion as ascertained at the 1920 collection of agricultural and pastoral statistics.

As regards counties, Eden County is the most closely settled, the average area of holdings being 15·39 acres, while Fiord County shows the largest average—viz., 9,009 acres. There are no counties in the North Island having an average in excess of 2,500 acres, but in the South Island there are no fewer than seven—viz., Awatere, Amuri, Tawera, Mackenzie, Vincent, Lake, and Fiord.

The average area for the Dominion is 532·81 acres, and twenty-two counties out of seventy-seven in the North Island exceed this, and twenty-seven out of fifty-two in the South Island. The average area for the North Island is 386·83 acres, and for the South 739·63 acres.

Table showing the Numbers and Average Areas of Holding for each Land District in the Dominion.

Land District.	Number of Holdings.	Total Area occupied.	Average Area of Holdings.
		Acres.	Acres.
North Auckland	13,009	2,998,755	230·51
Auckland	11,261	4,308,673	382·62
Hawke's Bay	6,345	4,666,294	735·43
Taranaki	6,288	1,705,180	271·18
Wellington	10,928	4,823,492	441·39
Nelson	3,914	1,329,369	339·64
Marlborough	1,970	2,532,798	1,285·68
Westland	1,471	1,732,949	1,178·08
Canterbury	12,887	8,276,908	642·27
Otago	7,786	7,918,028	1,016·96
Southland	5,733	3,180,633	554·79
Totals, Dominion ..	81,592	43,473,079	532·81

Tenure of Occupied Lands.

Land in occupation in each land district tabulated according to tenure is given below. The acreage in the fifth column does not agree exactly with the figures published in the report of the Lands and Survey Department, for the reason that, although these figures include Crown reserves leased, they do not include Crown lands alienated but not in occupation at the time of collecting the agricultural and pastoral statistics; also, the figures given in the fifth column are as at the 31st January, whilst the figures published by the Lands and Survey Department are as at the 31st March.

OCCUPIED LANDS.—TENURE, 1920.

Land District.	Total of Holdings.	Freehold (occupied by Owner).	Leased from Private Individuals or Public Bodies.	Leased from Natives.	Held from Crown under Different Tenures.	Tenure not specified.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
North Auckland	2,998,755	2,303,504	166,782	82,674	445,795	..
Auckland ..	4,308,673	2,525,969	201,754	455,865	1,125,085	..
Hawke's Bay ..	4,666,294	2,760,223	346,279	706,376	853,416	..
Taranaki ..	1,705,180	862,125	220,917	119,318	502,820	..
Wellington ..	4,823,492	3,175,471	473,102	409,632	765,287	..
Nelson ..	1,329,369	626,017	65,596	14,978	622,774	4
Marlborough ..	2,532,798	835,441	53,284	27,287	1,616,786	..
Westland ..	1,732,949	150,990	23,935	5,129	1,552,895	..
Canterbury ..	8,276,908	3,152,933	673,658	11,555	4,438,762	..
Otago ..	7,918,028	1,601,085	281,543	7,258	6,028,142	..
Southland ..	3,180,633	1,489,340	280,178	6,116	1,404,999	..
Totals ..	43,473,079	19,483,098	2,787,028	1,846,188	19,356,761	4

In point of area the most important Crown-lands tenure is "pastoral run," the area for 1920 being 10,174,236 acres. Considerable areas are also held under the following tenures: Small grazing-runs, 2,740,032 acres; lease in perpetuity, 1,752,876 acres; occupation with right of purchase, 1,507,814 acres; renewable lease, 1,744,903 acres.

Further details of tenure, &c., of Crown lands will be found in Subsection A of this section.

Lands in occupation are, however, not strictly comparable with Crown lands alienated or in process of alienation, for certain lands have passed into the hands of Europeans which were never made waste lands of the Crown. It must also be remembered that of the freehold land in the Dominion a considerable area is unoccupied and unused.

SECTION XVI.—AGRICULTURE AND LIVE-STOCK.

INTRODUCTORY.

DURING the past five years complete collections of agricultural and pastoral statistics have been made annually by the Census and Statistics Office through the agency of officers of the Police Department. Practically every holding of 1 acre or over (with the exception of those within borough boundaries) is canvassed personally. Interim returns of principal crops and live-stock are published in the *New Zealand Gazette*, and when the collection is completed the full statistics are gazetted, and are also included in Volume iii of "Statistics of the Dominion of New Zealand."

In the years previous to and inclusive of 1908–9 complete statistics were collected annually by sub-enumerators appointed by the Department of Agriculture; in 1909–10 full statistics were not collected, but the areas under the principal grain and root crops were ascertained and an estimate made of the yields; for 1910–11 complete information was obtained in connection with the 1911 census. In the four succeeding years returns were collected by post regarding the acreage and yield of the principal crops; but this method of collection was found to be less satisfactory than the personal visit, and the figures for these years are probably not quite accurate.

In addition to the main collection of agricultural and pastoral statistics the following supplementary inquiries are undertaken: Areas sown or intended to be sown in wheat and oats (taken at the end of September); stocks of flour, wheat, and oats in the hands of millers, merchants, storekeepers, and farmers (at the end of November); estimated yields of wheat and oats (early in February); and returns of wheat and oats threshed (throughout the threshing season). The results of these first three inquiries are gazetted, and they are also, together with the threshing, published from time to time in the *Monthly Abstract of Statistics*.

SUBSECTION A.—AGRICULTURE.

Of the total area in occupation in 1919–20 (43,473,079 acres) 18,004,776 acres were in cultivation. Land in cultivation expressed as a percentage of land in occupation for the past five years, together with the area in cultivation per inhabitant (inclusive of Maoris) is given below:—

Year.	Total Area in Occupation.	Total Area in Cultivation.	Cultivated Land per Cent. of Occupied Land.	Cultivated Land per Inhabitant.
	Acres.	Acres.		Acres.
1915–16	41,262,193	16,895,590	40·95	14·69
1916–17	42,744,719	17,061,675	39·92	14·85
1917–18	43,212,079	17,386,160	40·23	15·15
1918–19	43,342,706	17,613,337	40·64	15·21
1919–20	43,473,079	18,004,776	41·42	14·83

The following table gives details of cultivation and total area occupied for each land district in the Dominion for the season, 1919–20.

AREA IN CULTIVATION AND IN OCCUPATION, 1919-20.

Land District.	In Grain and Pulse Crops.	In Grasses and Clovers (for Hay or Seed), and Green and Root Crops.	In Fallow.	In Grasses and Clovers not cut for Hay or Seed.	In Vineyards and Orchards.	In Market Gardens, Nurseries, and Seed-gardens.	In Private Gardens and Pleasure-grounds.	In Plantations (not Native Bush).	Total Area in Cultivation.	Unimproved Land.	Total Area in Occupation.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
North Auckland ..	9,572	30,994	8,549	1,440,076	7,083	1,105	5,504	3,331	1,506,214	1,492,541	2,998,755
Auckland .. .	20,874	106,020	17,851	2,023,057	2,048	207	5,116	7,534	2,182,707	2,125,966	4,308,673
Hawke's Bay .	21,630	45,505	960	3,077,783	2,790	280	4,988	5,865	3,159,801	1,506,493	4,666,294
Taranaki	8,892	66,552	319	1,241,167	242	55	2,606	619	1,320,452	384,728	1,705,180
Wellington ..	29,043	83,817	447	3,359,233	1,129	862	7,982	5,515	3,488,028	1,335,464	4,823,492
Nelson	13,812	11,016	585	320,952	10,914	289	1,280	1,349	360,197	969,172	1,329,369
Marlborough ..	30,923	14,300	859	360,935	1,041	36	1,787	1,782	411,663	2,121,135	2,532,798
Westland	899	2,303	16	133,928	67	12	451	787	138,463	1,594,486	1,732,949
Canterbury ..	369,088	290,666	31,096	2,034,391	2,892	901	14,809	21,021	2,764,864	5,512,044	8,276,908
Otago	125,265	136,252	18,813	1,074,964	4,908	186	6,996	5,494	1,372,878	6,545,150	7,918,028
Southland	83,448	148,120	2,265	1,058,779	250	63	5,318	1,266	1,299,509	1,881,124	3,180,633
Totals ..	713,446	935,545	81,760	16,125,265	33,364	3,996	56,837	54,563	18,004,776	25,468,303	43,473,079

Further details of the various crops are given under their respective headings on the following pages, but as unimproved lands are not again referred to, a table is appended showing condition by land districts:—

UNIMPROVED OCCUPIED LAND, 1919–20.

Land District.	Phormium Tenax.	Tussock and other Native Grasses.	Fern, Scrub, and Second Growth.	Standing Virgin Bush.	Barren and Unproductive Land.	Total Unimproved Occupied Land.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
North Auckland	4,796	218,098	778,577	384,795	106,275	1,492,541
Auckland ..	8,417	284,054	1,009,790	755,880	67,825	2,125,966
Hawke's Bay ..	433	657,503	450,807	323,155	74,595	1,506,493
Taranaki ..	54	7,020	63,804	306,679	7,171	384,728
Wellington ..	19,357	496,141	292,392	435,780	91,794	1,335,464
Nelson ..	1,785	299,933	152,980	468,857	45,617	969,172
Marlborough ..	913	1,284,457	248,191	198,702	388,872	2,121,135
Westland ..	6,478	198,018	75,977	952,301	361,712	1,594,486
Canterbury ..	1,468	4,466,004	114,722	230,187	699,663	5,512,044
Otago ..	1,582	5,628,060	370,119	267,061	278,328	6,545,150
Southland ..	4,584	1,352,825	165,008	235,546	123,161	1,881,124
Totals ..	49,867	14,892,113	3,722,367	4,558,943	2,245,013	25,468,303

PRINCIPAL CROPS.

The areas, yields, and average yields per acre of the principal crops during the past ten seasons are shown in the following tables:—

GRAIN AND PULSE CROPS, 1910–11 TO 1919–20.

Areas.

Season.	Wheat.	Oats.	Barley.	Maize.	Peas and Beans.
	Acres.	Acres.	Acres.	Acres.	Acres.
1910–11	322,167	302,827	33,491	13,057	16,627
1911–12	215,528	403,668	31,644	6,094	..
1912–13	189,869	386,786	37,486	4,683	..
1913–14	166,774	361,741	32,022	5,942	..
1914–15	229,600	287,561	18,347	5,477	..
1915–16	329,207	212,688	30,204	8,086	9,209
1916–17	218,942	177,332	29,648	6,359	11,905
1917–18	280,978	156,202	18,860	8,151	11,685
1918–19	208,030	172,686	18,753	9,792	17,929
1919–20	139,611	179,800	22,907	9,064	14,416

Yields.

Season.	Wheat.		Oats.		Barley.		Maize.		Peas and Beans.	
	Total.	Average per Acre.	Total.	Average per Acre.	Total.	Average per Acre.	Total.	Average per Acre.	Total.	Average per Acre.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1910–11	8,290,221	25·73	10,118,917	33·41	927,112	27·68	569,807	43·64	583,750	35·11
1911–12	7,261,138	33·69	19,662,668*	48·71	1,254,648	39·65	278,252	45·66	..	..
1912–13	5,179,626	27·28	13,583,924*	35·12	1,377,610	36·75	222,115	47·43	..	..
1913–14	5,231,700	31·37	14,740,946*	40·75	1,205,628	37·65	307,736	51·79	..	..
1914–15	6,644,336	28·94	11,436,301*	39·77	596,828	32·53	275,274	50·26	..	..
1915–16	7,108,360	21·59	7,653,208	35·98	820,174	27·15	340,372	42·09	163,273	17·73
1916–17	5,083,277	23·22	5,371,249	30·29	758,935	25·60	274,332	43·14	243,297	20·43
1917–18	6,807,536	24·23	4,942,759	31·64	568,702	30·15	367,761	45·09	312,582	26·73
1918–19	6,567,629	31·57	6,884,609	39·88	710,932	37·91	413,595	42·17	505,950	28·16
1919–20	4,559,934	32·66	6,967,862	38·75	815,807	35·61	405,775	44·76	369,306	25·62

*The figures for 1911-12 to 1914–15 (inclusive) do not represent actual results, but were obtained by applying to ascertained average yields per acre the areas stated by growers to be intended for threshing. It would appear, however, that in many cases farmers included under the heading "Oats for Threshing" areas which were intended or used for chaffing or other purposes. The yields given are therefore probably overstated.

CEREALS AND GRASSES FOR CHAFF, HAY, OR ENSILAGE, AND FOR GREEN FODDER.

Areas.

—	Wheat for Chaff, &c.	Oats for Chaff, &c.	Barley for Chaff, &c.	Maize for Ensilage, &c.	Grasses and Clovers for Hay.	Green Fodder.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1910–11 ..	14,222*	290,569*	4,640*	5,800*	62,600	..
1911–12 ..	..	..	..	..	..	..
1912–13 ..	..	..	..	..	..	..
1913–14 ..	..	..	..	..	..	..
1914–15 ..	..	..	..	..	..	..
1915–16 ..	6,215	429,437	2,040	624	94,330	229,496
1916–17 ..	3,738	354,550	1,240	711	106,723	218,452
1917–18 ..	2,258	311,316	634	613	111,181	180,867
1918–19 ..	1,646	301,724	530	272	131,557	149,622
1919–20 ..	2,125	322,174	711	589	117,110	166,758

* Including green fodder.

Yields.

—	Wheat.	Oats.	Barley.	Maize.	Hay.
	Tons.	Tons.	Tons.	Tons.	Tons.
1910–11	..	..	..	..	..
1911–12	..	..	..	..	..
1912–13	..	..	..	..	..
1913–14	..	..	..	..	..
1914–15	..	..	..	..	..
1915–16	7,440	572,435	3,387	3,493	177,165
1916–17	5,186	432,878	2,151	5,107	179,505
1917–18	3,549	419,434	1,240	3,335	180,436
1918–19	2,554	461,739	938	1,378	225,549
1919–20	3,172	467,640	1,182	2,909	184,115

SEED AND ROOT CROPS.

Areas.

—	Rye-grass.	Cocksfoot.	Chewings Fescue.	Red Clover and Cow-grass.	White Clover.	Potatoes.	Turnips.	Mangolds.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1910–11 ..	46,706	41,918	..	..	..	29,023	450,959	14,082
1911–12 ..	77,535	38,297	..	..	..	28,248	..	..
1912–13 ..	63,031	34,007	..	..	..	23,480	..	..
1913–14 ..	55,936	25,935	..	..	..	29,164	..	..
1914–15 ..	..	..	..	..	..	..	..	..
1915–16 ..	43,095	13,293	5,787	1,643	888	29,809	572,137	13,046
1916–17 ..	79,135	16,134	5,514	2,978	1,330	26,156	526,283	9,073
1917–18 ..	70,220	16,595	4,372	6,907	3,722	22,854	450,819	8,712
1918–19 ..	31,250	19,318	2,329	6,682	6,798	19,169	438,045	8,233
1919–20 ..	39,580	16,789	3,425	6,181	2,284	24,933	542,310	9,546

Yields.

—	Rye-grass.	Cocksfoot.	Chewings Fescue.	Red Clover and Cow-grass.	White Clover.	Potatoes.
	Bushels.*	lb.	lb.	lb.	lb.	Tons.
1910–11 ..	1,167,650	5,868,520	..	..	..	141,510
1911–12 ..	2,198,893	6,974,650	..	..	..	144,912
1912–13 ..	1,458,947	5,285,708	..	..	..	147,689
1913–14 ..	1,098,835	4,956,438	..	..	..	157,194
1914–15 ..	..	..	..	..	..	...
1915–16 ..	795,416	1,577,285	1,230,219	385,638	141,469	128,807
1916–17 ..	1,152,487	1,907,043	1,247,545	443,861	143,465	133,642
1917–18 ..	1,355,612	2,410,557	1,013,042	1,076,360	461,853	100,596
1918–19 ..	646,194	3,761,814	551,588	1,255,478	958,360	105,483
1919–20 ..	652,672	2,201,729	827,769	1,146,882	335,203	144,705

* Of 20 lb.

WHEAT.

Wheat is principally grown in the central and southern portions of the South Island. Eighty-two per cent. of the grain produced now comes from Canterbury; Otago and Southland together produce 15 per cent., while the remainder of the South Island and the whole of the North Island contribute the remaining 3 per cent. The area under wheat for threshing in each season since 1874–75 is given below :—

Year.	Area.	Year.	Area.	Year.	Area.	Year.	Area.
	Acres.		Acres.		Acres.		Acres.
1874–75	105,673	1886–87	253,025	1898–99	399,034	1909–10	311,000
1875–76	90,804	1887–88	357,359	1899–1900	269,749	1910–11	322,167
1876–77	141,614	1888–89	362,153	1900–1	208,084	1911–12	215,528
1877–78	243,406	1889–90	335,861	1901–2	167,474	1912–13	189,869
1878–79	264,861	1890–91	301,460	1902–3	195,255	1913–14	166,774
1879–80	270,198	1891–92	402,273	1903–4	230,959	1914–15	229,600
1880–81	324,949	1892–93	381,245	1904–5	258,896	1915–16	329,207
1881–82	365,715	1893–94	242,737	1905–6	222,183	1916–17	218,942
1882–83	390,818	1894–95	148,575	1906–7	206,185	1917–18	280,978
1883–84	377,706	1895–96	245,441	1907–8	193,031	1918–19	208,030
1884–85	270,043	1896–97	258,608	1908–9	252,391	1919–20	142,473
1885–86	173,891	1897–98	315,801				

The area (for threshing) and the production of wheat per head of population for the last ten years are now given :—

Year.	Per Head of Population.		Year.	Per Head of Population.	
	Area.	Production.		Area.	Production.
	Acres.	Bushels.		Acres.	Bushels.
1910–11 ..	0·32	8·35	1915–16 ..	0·30	6·47
1911–12 ..	0·21	7·15	1916–17 ..	0·19	4·62
1912–13 ..	0·18	4·98	1917–18 ..	0·26	6·19
1913–14 ..	0·16	4·90	1918–19 ..	0·18	5·67
1914–15 ..	0·21	6·09	1919–20 ..	0·12	3·76

Unless there is a considerable carry-over from the previous season, importation of wheat requires to be made when the production nears or falls below 6 bushels per head of population. The carry-over from 1911–12 made up the deficiency of the 1913 harvest; but in 1914, 121,737 bushels were imported; in 1915, 522,617 bushels; in 1916, 51,512 bushels; in 1917, 719,977 bushels; in 1918, 1,370,542 bushels; and in 1919, 1,336,222 bushels.

Wheat grown for purposes other than threshing is insignificant.

Wheat-production in Australasia, 1918–19.

The area and yield of wheat in 1918–19 for each State in the Common wealth of Australia and in New Zealand were as follows:—

State.	Wheat Crop.		
	Area.	Total Yield.	Average Yield per Acre.
	Acres.	Bushels.	Bushels.
Queensland	21,637	104,509	4·83
New South Wales (including Federal Territory)	2,409,669	18,325,000	7·60
Victoria	2,214,490	25,239,871	11·40
South Australia	2,186,349	22,936,925	10·49
Western Australia	1,146,103	8,845,387	7·72
Tasmania	11,917	186,570	15·66
Totals for Commonwealth ..	7,990,165	75,638,262	9·47
New Zealand	**208,030**	**6,567,629**	**31·57**
Grand totals	8,198,195	82,205,891	10·03

The average production per acre for the last ten seasons is—for New Zealand, 28·02 bushels per acre; and for Australia, 10·47 bushels per acre.

It may be said that although from twenty to thirty countries in the world generally produce more wheat than does New Zealand, only three or four European countries have a better record of production per acre. This says much for the fertility of the soil of the Dominion, for cultivation here is naturally less intensive than it is in the closely settled continental countries.

Oats.

In point of area oats is the most important grain crop of the Dominion. Canterbury, Otago, and Southland produce about 80 per cent. of the total, the remainder of the South Island 5 per cent., and the North Island 15 per cent. The greater portion of the oat crop is usually converted into chaff without threshing, but the proportion so dealt with depends on market conditions. In 1915–16, 33·12 per cent. of the crop harvested was threshed; in 1916–17, 33·36 per cent.; in 1917–18, 33·41 per cent.; in 1918–19, 36·40 per cent.; and in 1919–20, 35·82 per cent.

The total and average yields per acre of grain and of chaff, hay, or ensilage for the past five seasons were as follows:—

Season.	Grain.		Chaff, Hay, or Ensilage.	
	Total Yield.	Average per Acre.	Total Yield.	Average per Acre.
	Bushels.	Bushels.	Tons.	Tons.
1915–16	7,653,208	35·98	572,435	1·33
1916–17	5,371,436	30·26	432,878	1·22
1917–18	4,942,759	31·64	419,434	1·35
1918–19	6,884,609	39·87	461,739	1·53
1919–20	6,967,862	38·75	467,640	1·45

Export of Oats.

New Zealand has no regular export of oats, and in some years has practically no surplus available for export. The quantity exported in 1891 and succeeding years was as follows:—

Year.	Export of Oats. Bushels.	Year.	Export of Oats. Bushels.	Year.	Export of Oats. Bushels.
1891 ..	4,052,414	1904 ..	2,693,417	1912 ..	4,123,920
1892 ..	3,830,444	1905 ..	1,076,916	1913 ..	239,268
1894 ..	1,963,288	1906 ..	734,997	1914 ..	1,323,362
1896 ..	2,247,053	1907 ..	36,693	1915 ..	682,652
1898 ..	816,210	1908 ..	972,896	1916 ..	220,265
1900 ..	5,818,648	1909 ..	5,133,473	1917 ..	5,767
1901 ..	10,514,924	1910 ..	444,586	1918 ..	3,250
1903 ..	4,956,330	1911 ..	72,826	1919 ..	144,827

Oat Crop of Australia, 1917–18.

The oat crop for 1917–18 in the States of the Commonwealth of Australia was as follows:—

	Acres.	Bushels.	Average per Acre. Bushels.
Queensland	3,002	44,688	14·89
New South Wales	82,512	1,452,144	17·60
Federal Capital Territory ..	79	2,967	37·56
Victoria	293,214	6,141,287	20·94
South Australia	106,556	1,248,529	11·72
Western Australia	95,666	908,592	9·50
Tasmania	34,771	589,224	16·95
Totals for Commonwealth	615,800	10,387,431	16·87

Barley.

The area under barley for threshing for the season 1919–20 was 22,907 acres, the crop amounting to 815,807 bushels, an average of 35·61 bushels per acre. In 1918–19 the area under barley was 18,753 acres, and the yield 710,932 bushels, or 37·91 bushels per acre.

Maize.

The returns for 1919–20 show that there were 9,064 acres sown for grain, being a decrease of 728 acres from the area for the previous season

(9,792 acres). The yield in 1920 was 405,775 bushels of corn, an average of 44·76 bushels per acre, and in 1919 413,595 bushels, an average of 42·17 bushels per acre. With the exception of a few acres in the South, maize is grown only in the North Island. In 1919–20 the Land District of North Auckland had 342 acres; Auckland, 5,632 acres; Hawke's Bay, 3,060 acres; Taranaki, 5 acres; Wellington, 22 acres; and Nelson, Canterbury and Otago, 1 acre each.

Peas and Beans.

The area under peas and beans for threshing in the season 1919–20 was 14,416 acres, yielding 369,306 bushels. The area under these crops in 1918–19 was 17,969 acres.

New Zealand has a considerable export of peas and beans, the figures for the past ten years being,—

Export of Peas and Beans, 1910–19.

Year.	Bushels.	Year.	Bushels.
1910	198,527	1915	201,942
1911	332,227	1916	84,168
1912	464,609	1917	111,175
1913	339,998	1918	90,495
1914	305,053	1919	451,595

Potatoes.

The area under potatoes in 1919–20 was 24,933 acres, yielding a return of 144,705 tons, or at a rate of 5·79 tons per acre, against 19,116 acres in 1918–19 and 105,483 tons (or 5·50 tons per acre).

These figures do not include areas of less than a quarter of an acre, so that a considerable quantity of potatoes grown for private use has not been taken into account.

The following table shows the average yield per acre of potatoes in each of the Australian States and in New Zealand from 1913–14 to 1917–18. Later figures for Australia are not available.

Average Yield per Acre of Potatoes, 1913–14 to 1917–18.

State.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.
	Tons.	Tons.	Tons.	Tons.	Tons.
Queensland	1·64	1·91	1·28	2·18	2·06
New South Wales	2·76	1·34	2·27	2·02	2·21
Victoria	2·37	2·89	3·05	2·55	2·72
South Australia	3·05	2·36	2·99	4·29	2·72
Western Australia	3·40	3·08	2·90	2·88	2·52
Tasmania	2·61	2·50	2·71	1·95	2·58
Federal Territory	1·47	1·88	3·57	2·92	2·27
Commonwealth	2·53	2·41	2·75	2·38	2·55
New Zealand	**5·39**	**6·06**	**4·83**	**5·11**	**4·38**

Turnips and Mangolds.

Turnips form a most important crop in a sheep-breeding country such as New Zealand, and in 1919–20 the area under this crop was 542,310 acres, while there were 9,546 acres of mangolds.

The figures for these crops for 1918–19 were 438,045 acres and 8,233 acres respectively.

Hops.

There were 440 acres under hops in 1919–20, 435 acres of this area being in the Nelson Land District. The total produce amounted to 700,876 lb.

Tobacco.

Previous to 1916 official statistics of the growing of tobacco were not collected since 1895. In 1889, 34 acres were being cultivated; in 1890, 25 acres; in 1891, 16 acres; in 1892, 6 acres; in 1893, 4 acres; in 1894, 4 acres; in 1895, 5 acres. In 1916, and again in 1917, the New Zealand Tobacco Company (Limited), Napier, returned 100 acres as under this crop. No tobacco was grown by this company in 1918, as the abundant crops obtained during the previous seasons were sufficient to fill manufacturing requirements up to 1919; again in 1919 no area was returned.

Certain localities which are free from frosts are eminently suited for this crop, which can be grown to advantage in young orchards, between the rows of fruit-trees.

Phormium Tenax.

Large areas (49,867 acres in 1919–20) in various parts of New Zealand are covered with *Phormium tenax*, the fibre of which is largely used for rope-making, &c. At the census of 1919 there were seventy-six mills in operation, employing 1,430 hands, the total value of output being £681,369. The export of fibre and tow during each of the past ten years was as follows:—

Phormium exported, 1910–19.

Year.	Fibre. Tons.	Tow. Tons.	Year.	Fibre. Tons.	Tow. Tons.
1910 ..	20,645	4,501	1915 ..	23,220	3,465
1911 ..	17,366	3,283	1916 ..	27,674	4,578
1912 ..	18,641	3,388	1917 ..	23,516	2,500
1913 ..	28,092	6,299	1918 ..	25,167	1,815
1914 ..	19,702	4,226	1919 ..	22,347	3,262

Gardens and Plantations.

In 1919–20 there were 3,540 acres in market gardens, 456 acres in nurseries and seed-gardens, and 56,837 acres in private gardens and pleasure-grounds. The area in plantations (not virgin bush) was 54,563 acres.

Orchards and the Fruit Industry.

The area in orchard in 1919–20 (exclusive of that within borough boundaries) was 33,179 acres; in 1918–19 there were 34,722 acres exclusive of boroughs. Orchards within boroughs aggregated 2,443 acres in 1916, these being the latest figures available at present, but the information will again be obtained in connection with the 1921 census.

The following table gives particulars, by land districts, of areas for private use and for commercial purposes:—

AREA IN ORCHARD, 1919–20

Land District.	For Private Use only.	For Commercial Purposes.		Total Area in Orchard.
		Not bearing.	Bearing.	
	Acres.	Acres.	Acres.	Acres.
North Auckland ..	1,774	2,434	2,802	7,010
Auckland	1,044	291	666	2,001
Hawke's Bay ..	526	725	1,493	2,744
Taranaki	190	9	43	242
Wellington	590	75	462	1,127
Nelson	374	4,903	5,324	10,901
Marlborough	301	234	506	1,041
Westland	44	2	21	67
Canterbury	992	782	1,116	2,890
Otago	606	1,500	2,800	4,906
Southland	234	4	12	250
Dominion ..	6,675	10,959	15,545	33,179

Commercial orchards are defined as "those producing fruit for sale to the value of £50 and upwards annually, or, if not yet in full bearing, that are calculated to produce fruit for sale to that value when in full bearing." Private orchards consist chiefly of small areas the produce of which is consumed principally on the holding, or, if sold, does not aggregate an annual value of £50. Larger areas which, through age, disease, or other cause, are incapable of producing a yearly revenue of the stipulated amount are also included in private orchards.

Large areas are continually being planted in fruit-trees, especially in the Nelson Land District, where tracts of land which until recently bore nothing but stunted manuka, and were looked upon as practically useless, have now been proved to be eminently suitable for growing fruit, particularly apples. A good market exists locally for choice clean fruit, but as the large areas recently planted come into bearing, growers will have to look to outside markets to take the surplus, and it is hoped that the export of fruit will become in time one of the largest in the Dominion.

The Department of Agriculture assists orchardists by supplying information on fruitgrowing generally, and as to the most up-to-date methods to adopt for the control of diseases and insect pests, pruning, &c. Practical demonstrations of pruning, spraying, and the grading and packing of fruit are given regularly by the Orchard Instructors attached to the Department.

Co-operative fruit-testing plots are established in various parts of the Dominion. These plots are for the purpose of—

(1.) Ascertaining which varieties of fruit are best adapted to particular districts:
(2.) Demonstrating various methods of pruning:
(3.) Conducting modified manurial experiments.

Extensive experiments have been carried out in the growing of tomatoes and the control of diseases affecting them, many thousands of pounds having been lost through failure of the tomato crops grown under glass during the last few years. The results of these experiments have proved of great value, and have enabled growers to adopt successful methods for the production of large and profitable crops.

The total acreage in vineyards outside of borough boundaries is 253 acres. The growing of outdoor grapes is chiefly confined to the districts situated between the North Cape and Hawke's Bay. The greater portion of the crop is used for wine-making, but a considerable quantity of outdoor-grown grapes is sold for table use.

Copies of full plans and specifications of a cool store capable of holding 4,000 cases of fruit have been prepared by the Department of Agriculture, and are supplied free on application.

The canning of fruit is also another important feature of the fruit industry. Plans and specifications for the building and equipment of a factory capable of turning out 4,000 cans per day are also available, free of charge, for those contemplating the erection of a factory.

State aid to the fruit-preserving industry is provided for by the Fruit-preserving Industry Act, 1913, whereby not more than £25,000 may be raised in any year for the purpose of making advances for the establishment of cold stores for fruit and of fruit-canning works, and otherwise for the assistance of the fruitgrowing industry. The advances during the financial year 1914–15 totalled £10,000.

The Orchard-tax Act, 1916, provides for the levying of a tax of 1s. per acre on commercial orchards (with a minimum of 2s. 6d.), the proceeds to be paid over to the New Zealand Fruitgrowers' Federation (Limited), and to be expended in aid of the fruitgrowing industry. This Act is to remain in force until 1921.

Grasses and Clovers for Seed.

The area under rye-grass for seed in the season 1919–20 was 39,580 acres, yielding 652,672 bushels of 20 lb., or a rate of 16·42 bushels per acre.

In cocksfoot there were 16,789 acres, which yielded 2,201,729 lb., or an average of 131·14 lb. per acre. The area in the previous season was 19,318 acres, and the total yield 3,761,814 lb., the average yield per acre being 194·70 lb. The area returned by farmers as being under cocksfoot is decreasing steadily, having been 41,918 acres in 1910–11. Much of the waste land of the Dominion is laid down in cocksfoot, including a large proportion of the land enclosed with the State railway-lines. Much of this is harvested, but no record of the amount obtained from this source is kept.

Pasture Grasses.

New Zealand is essentially suited for grazing purposes. Wherever there is light and moisture English grasses thrive when the natural bush and fern are cleared off—in fact, the white clover gradually overcomes the fern; and, from the mildness of the winter season, there are few

places where there is not some growth even in the coldest months of the year. In all parts of the Dominion stock live, although in varying condition, without other food than such as they can pick up. Sown-grass land, as might be expected, heads the list of cultivations.

At the beginning of the year 1920 there were 16,125,265 acres under artificial (pasture) grasses, an increase of 293,661 acres over the area in 1919.

Seeds for sowing pasture lands are used much as in Great Britain, the following being a common mixture: Perennial rye-grass, 25 lb. to 30 lb. per acre; cocksfoot, 2 lb.; alsike, 2 lb.; timothy, 3 lb.; cow-grass, 2 lb.; red clover, 2 lb.; white clover, 2 lb.; rape, 1 lb.: total, 39 lb. to 44 lb. per acre. Pastures are renewed at intervals of from four to eight years, according to the nature of the land.

The following shows the acreage in sown grasses in each State of Australia and in New Zealand for the 1917–18 season:—

	Acres.
Queensland	406,094
New South Wales	1,389,640
Victoria	1,268,310
South Australia	20,155
Western Australia	11,769
Tasmania	679,512
Federal Territory	83
New Zealand	**15,448,134**

It will be observed that the acreage of land under sown grasses is far greater in New Zealand than in the whole of Australia and Tasmania. When compared in size with the States of Australia, New Zealand is not large—about one-thirtieth of their total area—but in respect of grazing capabilities the relative importance of this country is much greater. Australia is generally unsuitable, owing to conditions of climate, for the growth of English grasses, and the amount of feed produced by the natural grasses throughout the year is very much less per acre than is obtained from the sown-grass lands in New Zealand; indeed, it may be said that the average productiveness of grass land is about nine times as great here as in Australia, or, in other words, that land in New Zealand covered with English grasses may be considered equal for grazing purposes to an area of Australian land about nine times as great.

In addition to the artificially sown pastures, the returns for 1919–20 show that 14,892,113 acres in tussock or native grass belonged to the occupied holdings, and were available for stock-feeding by the sheep and cattle farmers.

SECTION XVI.—AGRICULTURE AND LIVE-STOCK—*continued.*

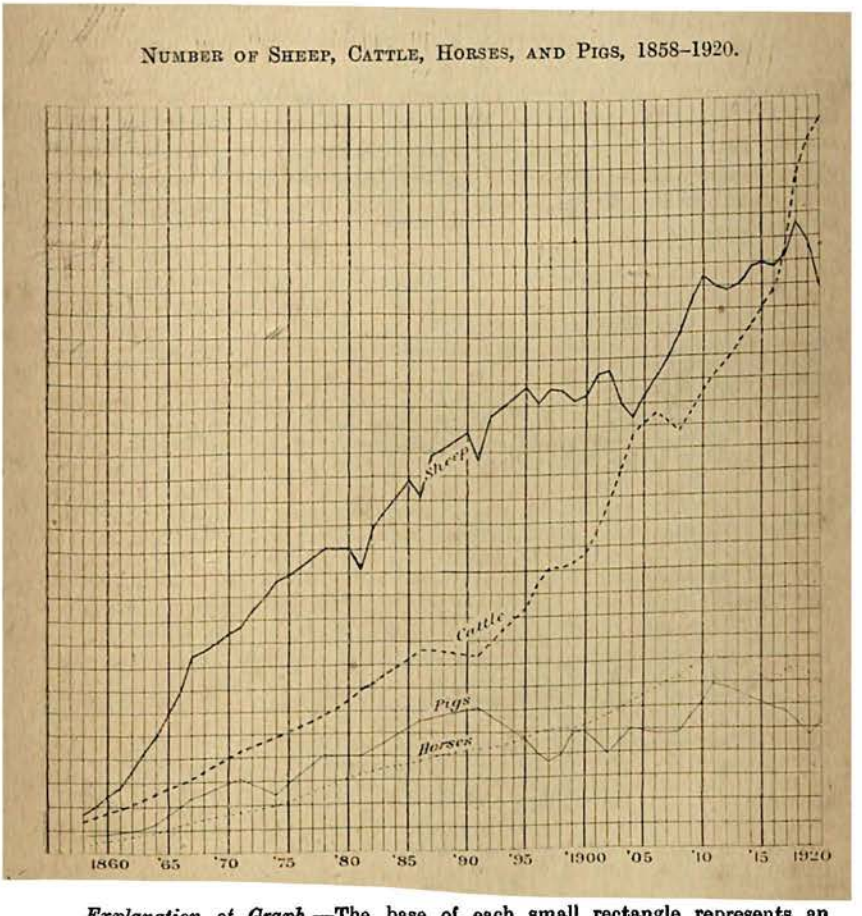
SUBSECTION B.—LIVE-STOCK.

A COMPARATIVE table is presented showing the increase in live-stock since the year 1858. The figures are taken from the census as far as 1891 and for 1911, but for 1895-96 and following years up to 1910 the results of the enumeration made annually by the Department of Agriculture have been made use of. No enumeration was taken from 1911 to 1915, except as regards sheep.

Year.	Horses.	Asses and Mules.	Cattle.	Sheep.	Goats.	Pigs.	Poultry.
1858 ..	14,912	122	137,204	1,523,324	11,797	40,734	*
1861 ..	28,275	153	193,285	2,761,383	12,191	43,270	236,098
1864 ..	49,409	339	249,760	4,937,273	12,005	61,276	378,414
1867 ..	65,715	323	312,835	8,418,579	11,964	115,104	676,065
1871 ..	81,028	397	436,592	9,700,629	12,434	151,460	872,174
1874 ..	99,859	267	494,917	11,704,853	14,276	123,921	1,058,198
1878 ..	137,768	241	578,430	13,069,338	14,243	207,337	1,323,542
1881 ..	161,736	362	698,637	12,190,215	11,223	200,083	1,566,114
1886 ..	187,382	297	853,358	15,174,263	10,220	277,901	1,679,021
1891 ..	211,040	348	831,831	16,753,752	9,055	308,812	1,790,070
1895-96	237,418	426	1,047,901	19,826,604	*	239,778	*
1896-97	249,813	434	1,138,067	19,138,493	*	209,834	*
1897-98	252,834	393	1,209,165	19,687,954	*	186,027	*
1898-99	258,115	534	1,203,024	19,673,725	*	193,512	*
1899-00	261,931	459	1,222,139	19,348,506	*	249,751	*
1900-1	266,245	480	1,256,680	19,355,195	*	250,975	*
1901-2	279,672	406	1,361,784	20,233,099	*	224,024	*
1902-3	286,955	464	1,460,663	20,342,727	*	193,740	*
1903-4	298,714	468	1,593,547	18,954,553	*	226,591	*
1904-5	314,322	448	1,736,850	18,280,806	*	255,320	*
1905-6	326,537	429	1,810,936	19,130,875	*	249,727	*
1906-7	342,608	451	1,851,750	20,108,471	*	242,273	3,191,604
1907-8	352,832	425	1,816,299	20,983,772	*	241,128	*
1908-9	363,259	519	1,773,326	22,449,053	*	245,092	*
1909 ..	*	*	*	23,480,707	*	*	*
1910 ..	*	*	*	24,269,620	*	*	*
1911 ..	404,284	404	2,020,171	23,996,126	*	348,754	3,693,137
1912 ..	*	*	*	23,750,153	*	*	*
1913 ..	*	*	*	24,191,810	*	*	*
1914 ..	*	*	*	24,798,763	*	*	*
1915 ..	*	*	*	24,901,421	*	*	*
1916 ..	371,331	246	2,417,491	24,788,150	17,601	297,501	3,465,638
1917 ..	373,600	320	2,575,230	25,270,386	18,235	283,770	*
1918 ..	378,050	253	2,869,465	26,538,302	17,730	258,694	*
1919 ..	363,188	296	3,035,478	25,828,554	16,924	235,347	*
1920 ..	346,407	262	3,101,945	23,914,506	14,564	266,829	*

* Not enumerated.

The following diagram will give an idea of the large increase in the number of horses, cattle, sheep, and pigs since 1858:—



Explanation of Graph.—The base of each small rectangle represents an interval of one year, and the vertical height the number of animals, as follows: Sheep, one million; cattle, one hundred thousand; horses and pigs, each fifty thousand.

The table on the following pages gives for each county and land district in the Dominion the totals of the principal varieties of live-stock. Further details as to sex, age, breed, &c., will be found under the respective headings later in this volume.

TABLE SHOWING FOR EACH LAND DISTRICT IN THE DOMINION THE NUMBER OF LIVE-STOCK AS AT 31ST JANUARY, 1920.

Land District (including Interior Boroughs).	Horses.	Asses and Mules.	Dairy Cows.	Cattle (including Dairy Cows)	Number of Sheep shorn, 1919-20.	Number of Lambs tailed, 1919-20.	Sheep (including Lambs) as at 30th April, 1920.	Pigs.	Goats	
									Angora.	Other.
North Auckland	39,456	58	126,724	412,248	693,265	246,708	664,455	35,905	1,198	1,741
Auckland	49,702	15	206,650	617,261	982,252	391,598	911,135	52,423	570	1,249
Hawke's Bay	36,534	83	47,321	465,514	5,531,706	2,050,604	5,454,427	16,058	616	646
Taranaki	23,498	3	157,376	357,906	957,090	336,425	860,365	42,043	204	2,469
Wellington	47,687	30	141,760	615,633	5,132,461	2,096,032	5,358,289	39,751	924	642
Nelson	8,348	..	20,964	59,903	421,623	136,903	451,374	9,205	1,128	1,064
Marlborough	7,111	..	11,656	39,967	965,247	307,480	1,011,741	5,816	548	951
Westland	2,777	2	10,072	40,561	55,897	29,005	66,100	3,273	14	94
Canterbury	63,686	42	68,985	193,248	4,262,804	2,160,035	4,727,882	41,037	255	168
Otago	38,500	21	47,189	134,324	2,638,757	1,051,316	2,807,098	14,128	20	16
Southland	29,108	8	54,757	165,380	1,434,148	641,646	1,601,640	7,190	..	47
Totals for Dominion ..	346,407	262	893,454	3,101,945	23,075,250	9,447,752	23,914,506	266,829	5,447	9,087

LIVE-STOCK IN AUSTRALASIA.

The following table gives the number of the principal kinds of live-stock in Australasia for the year 1918:—

State.	Sheep.	Cattle.	Horses.	Pigs.
New South Wales ..	37,243,770	3,271,782	721,302	294,338
Victoria	15,773,902	1,596,544	523,788	267,819
Queensland	18,220,985	5,786,744	759,726	140,966
South Australia	6,625,184	342,768	269,255	79,078
Western Australia ..	7,183,747	943,647	180,094	85,863
Tasmania	1,841,924	218,234	41,221	44,328
Northern Territory ..	58,620	570,039	31,436	1,200
Federal Territory ..	138,104	8,894	1,421	310
Totals for Commonwealth	87,086,236	12,738,852	2,528,243	913,902
New Zealand	**25,828,554**	**3,035,478**	**363,188**	**235,347**

SHEEP.

The Dominion is eminently suited for sheep-breeding, practically every description of sheep finding a favourable local habitat. In the hilly and down country of the South Island the merino has been bred for very many years, and was the original sheep depastured. In fact, the merino ewe furnished the foundation of the crossbred stock which has made Canterbury mutton famous on British meat-markets. In the early days of the Canterbury meat trade the English Leicester of the original type was the favourite ram for putting to the merino ewe. Of later years the Lincoln has been largely employed to cross with the merino, and black-faced rams have been further employed to put to the crossbred ewes. In the North Island the Romney sheep, which suits the rather moist climate of this portion of the Dominion, has become the most popular sheep; it is also increasing in numbers in the South Island. The Lincoln and Border Leicester are also favoured in both Islands, while the Southdown is displacing other breeds for fat-lamb production throughout the Dominion.

A table appears on p. 230 giving the predominating breed of sheep in each Land District in the Dominion, together with the average weight of fleece obtained in the past five years.

From the table following it will be seen that the flocks of the North Island increased from 5,285,907 sheep in the year 1886 to 10,009,731 in 1906 and 13,880,799 in 1916, or at the rate of 89·37 per cent. in the

first twenty years of the period, and of 38·67 per cent. between 1906 and 1916; 1920 shows a decrease of 7·41 per cent. from the previous year.

The number of sheep in the South Island has fluctuated considerably, decreases from previous years having occurred in 1911, 1912, 1913, 1915, 1916, 1917, 1919, and 1920.

Year.	North Island.	South Island.	Total.
1886	5,285,907	9,888,356	15,174,263
1910	12,917,662	11,351,958	24,269,620
1911	12,814,353	11,181,773	23,996,126
1912	12,618,089	11,132,064	23,750,153
1913	13,145,445	11,046,365	24,191,810
1914	13,155,958	11,642,805	24,798,763
1915	13,315,916	11,585,505	24,901,421
1916	13,880,799	10,907,351	24,788,150
1917	14,567,128	10,703,258	25,270,386
1918	14,758,278	11,780,024	26,538,302
1919	14,211,944	11,616,610	25,828,554
1920	13,166,750	10,747,756	23,914,506

There were fewer sheep in the Dominion in 1920 than in any year since 1912.

In the table given above the Chatham Islands are included in the South Island, as they form portion of the Canterbury-Kaikoura Sheep District. In dealing with land districts, however, they are included with Wellington.

Of the land districts, Hawke's Bay had most sheep in 1920, Wellington came next, and Canterbury occupied the third place.

Land District.	No. of Sheep in 1919.	No. of Sheep in 1920.	Increase.	Decrease.
North Auckland ..	728,915	664,455	..	64,460
Auckland	966,377	911,135	..	55,242
Hawke's Bay ..	5,977,805	5,454,427	..	523,378
Taranaki	937,227	860,365	..	76,862
Wellington ..	5,683,541	5,358,289	..	325,252
Nelson	478,279	451,374	..	26,905
Marlborough ..	1,044,307	1,011,741	..	32,566
Westland ..	71,647	66,100	..	5,547
Canterbury ..	5,147,677	4,727,882	..	419,795
Otago	3,044,503	2,807,098	..	237,405
Southland.. ..	1,748,276	1,601,640	..	146,636
Total ..	25,828,554	23,914,506	..	1,914,048

The number of breeding-ewes and the total number of sheep in each county on the 30th April, 1920, are detailed in the next table.

TABLE SHOWING FOR EACH COUNTY THE NUMBER OF BREEDING-EWES AND THE TOTAL NUMBER OF SHEEP ON THE 30TH APRIL, 1920.

County.	Total (including Lambs).	Breeding-ewes (included in previous Column).
Mongonui	47,644	22,120
Whangaroa ..	16,715	8,381
Bay of Islands ..	80,731	39,623
Hokianga	41,700	17,890
Whangarei ..	101,223	46,709
Hobson	99,086	44,016
Otamatea	57,445	27,043
Rodney	62,387	27,542
Waitemata ..	54,286	24,571
Eden	2,631	292
Great Barrier ..	12,217	7,492
Manukau	50,243	22,321
Franklin	38,147	17,639
Totals, North Auckland L.D.	664,455	305,639
Waikato	46,120	22,060
Raglan	178,252	82,296
Waipa	24,723	13,851
Kawhia	47,766	25,205
Awakino	103,200	37,521
Waitomo	141,084	61,448
Coromandel ..	42,044	19,413
Thames	5,477	3,194
Ohinemuri ..	3,994	1,237
Tauranga	10,478	3,663
Piako	26,042	12,380
Matamata ..	16,441	7,908
Rotorua	13,556	3,790
Whakatane ..	53,760	21,592
Opotiki	161,543	57,957
East Taupo ..	9,301	4,242
West Taupo ..	27,354	9,079
Totals, Auckland L.D.	911,135	386,836
Waiapu	664,777	317,790
Waikohu	650,311	316,169
Uawa	931,344	435,001
Cook		
Wairoa	639,096	245,199
Hawke's Bay ..	1,059,555	436,630
Waipukurau ..	115,124	52,524
Waipawa	346,643	152,127
Woodville ..	82,791	38,712
Dannevirke ..	260,141	130,845
Patangata ..	591,626	288,477
Weber	113,019	43,401
Totals, Hawke's Bay L.D.	5,454,427	2,456,875
Ohura	153,894	61,222
Clifton	86,771	35,157
Taranaki	26,219	13,456
Egmont	13,654	5,119
Stratford	73,317	33,353
Whangamomona ..	83,412	35,270
Waimate West ..	3,025	1,035
Hawera	81,908	28,687
Eltham	64,270	25,468
Patea	273,395	90,701
Totals, Taranaki L.D.	860,365	330,068
Waitotara ..	238,913	89,407
Wanganui ..	465,850	175,037
Waimarino ..	320,003	119,760
Kaitieke	140,694	52,913
Rangitikei ..	1,019,137	414,348
Kiwitea	286,712	143,447
Pohangina ..	150,212	82,062
Kairanga ..	120,108	52,414
Oroua	165,694	90,650
Manawatu ..	138,437	51,848
Horowhenua ..	112,284	51,294
Pahiatua	197,719	99,254
Akitio	262,534	118,769
Castlepoint ..	160,759	79,017
Eketahuna ..	102,003	55,376
Mauriceville ..	62,092	38,094
Masterton ..	475,538	235,633
Wairarapa South ..	178,610	95,866
Featherston ..	405,889	203,928
Hutt	135,642	68,034
Makara	77,508	42,135
Chatham Islands ..	81,921*	33,394*
Totals, Wellington L.D.	5,358,289	2,392,680
Collingwood ..	20,442	9,455
Takaka	55,576	33,552
Waimea	310,849	179,286
Buller	5,137	2,769
Murchison ..	48,231	24,227
Inangahua ..	11,139	5,828
Totals, Nelson L.D.	451,374	255,117
Sounds	168,030	97,528
Marlborough ..	355,222	175,532
Awatere	290,098	152,227
Kaikoura	198,391	115,772
Totals, Marlborough L.D.	1,011,741	541,059

* 1919 figures.

TABLE SHOWING FOR EACH COUNTY THE NUMBER OF BREEDING-EWES AND THE TOTAL NUMBER OF SHEEP ON THE 30TH APRIL, 1920—*continued.*

County.	Total (including Lambs).	Breeding-ewes (included in previous Column).	County.	Total (including Lambs).	Breeding-ewes (included in previous Column).
Grey	27,370	14,719	Mackenzie ..	473,871	271,732
Westland	38,730	19,432	Waimate	594,919	327,719
Totals, Westland L.D.	66,100	34,151	Totals, Canterbury L.D.	4,727,882	2,709,306
Cheviot	186,298	121,198	Waitaki	610,110	320,638
Amuri	399,675	210,413	Maniototo ..	291,967	142,824
Waipara	367,840	234,469	Waihemo ..	137,650	74,017
Ashley	109,868	63,581	Waikouaiti ..	85,528	51,696
Oxford	105,250	61,428	Peninsula ..	5,846	3,698
Kowai	84,855	50,031	Taieri	203,520	98,573
Rangiora	44,580	25,419	Tuapeka	410,894	177,157
Eyre	59,902	35,575	Bruce	215,489	105,391
Waimairi	8,714	6,198	Clutha	326,401	161,742
Paparua	41,167	16,918	Vincent	297,186	146,295
Malvern	150,323	73,528	Lake	222,557	94,782
Tawera	89,773	43,501	Totals, Otago L.D.	2,807,098	1,376,813
Heathcote ..	13,139	5,215			
Halswell	14,496	8,347			
Selwyn	224,409	113,599	Fiord	..	..
Springs	31,036	16,848	Wallace	480,545	235,809
Ellesmere	86,167	52,099	Southland ..	1,116,922	542,436
Mount Herbert ..	50,632	35,640	Stewart Island ..	4,173	1,760
Wairewa	79,760	59,428			
Akaroa	88,299	52,566	Totals, Southland L.D.	1,601,640	780,005
Ashburton	934,245	549,530			
Geraldine	302,293	174,841			
Levels	186,371	99,488	Totals for Dominion	23,914,506	11,568,549

NUMBER OF FLOCKS, 1916, 1917, 1918, 1919, AND 1920.

Size of Flocks.	1916.	1917.	1918.	1919.	1920.
Under 500	11,818	11,812	11,562	11,719	12,286
500 and under 1,000 ..	4,911	5,071	5,603	5,466	5,249
1,000 " 2,500 ..	4,344	4,279	4,747	4,637	4,411
2,500 " 5,000 ..	1,299	1,375	1,407	1,440	1,314
5,000 " 10,000 ..	566	629	622	611	536
10,000 " 20,000 ..	202	176	187	162	139
20,000 and upwards ..	41	38	40	30	25
Totals	23,181	23,380	24,168	24,065	23,960

The average size of the flocks is found to have been 1,069 sheep in 1916, 1,081 in 1917, 1,098 in 1918, 1,073 in 1919, and 998 in 1920.

The number of the different classes composing the flocks in April, 1920, was as follows:—

	North Island.	South Island.	Total in Dominion.
Stud sheep (entered in Flock-book)—			
Merino	..	16,041	16,041
Lincoln	30,745	4,210	34,964
Romney	88,967	50,503	139,470
Border Leicester	728	20,985	21,713
English Leicester	1,223	26,254	27,477
Shropshire	595	2,134	2,729
Southdown	10,625	5,663	16,288
Corriedale	555	26,644	27,199
Other breeds	399	721	1,120
Totals	133,846	153,155	287,001
Sheep of a distinctive breed, but not entered in Flock-book—			
Merino	39,004	764,585	803,589
Lincoln	253,579	20,453	274,032
Romney	2,375,657	657,182	3,032,839
Border Leicester	10,176	131,984	142,160
English Leicester	4,161	146,276	150,437
Shropshire	2,769	6,343	9,112
Southdown	26,530	5,885	32,415
Corriedale	7,940	433,096	441,036
Half-bred	..	1,142,459	1,142,459
Other breeds	1,880	12,513	14,393
Totals	2,721,696	3,320,776	6,042,472
Flock sheep—			
Crossbreds and others not otherwise enumerated	10,311,208	7,273,825	17,585,033
Grand totals	13,166,750	10,747,756	23,914,506

The following table gives the predominating breed of sheep and the average weight of fleece for each land district in the Dominion in 1916, 1917, 1918, 1919, and 1920.

TABLE SHOWING THE PREDOMINATING BREED OF SHEEP AND THE AVERAGE WEIGHT OF FLEECE FOR EACH LAND DISTRICT IN THE DOMINION FOR THE YEARS 1916, 1917, 1918, 1919, AND 1920.

Reference.—M., Merino. L., Lincoln. R., Romney. B.L., Border Leicester. E.L., English Leicester. Shp., Shropshire. Sd., Southdown. C., Corriedale. Hb., Half-bred. O., Other breeds.

Land District.	1915–16.*		1916–17.*		1917–18.		1918–19.		1919–20.	
	Predominating Breed of Sheep.	Average Weight of Fleece.	Predominating Breed of Sheep.	Average Weight of Fleece.	Predominating Breed of Sheep.	Average Weight of Fleece.	Predominating Breed of Sheep.	Average Weight of Fleece.	Predominating Breed of Sheep.	Average Weight of Fleece.
		lb.		lb.		lb.		lb.		lb.
North Auckland	R.	7·04	R.	6·92	R.	6·61	R.	6·60	R.	6·48
Auckland ..	R.	6·74	R.	6·62	R.	6·72	R.	6·99	R.	6·93
Hawke's Bay ..	R.	7·73	R.	8·39	R.	7·63	R.	7·89	R.	7·58
Taranaki ..	L.	6·83	R.	6·88	R.	6·72	R.	7·20	R.	7·45
Wellington ..	R.	7·98	R.	8·14	R.	7·85	R.	8·12	R.	7·88
Nelson ..	R.	5·77	R.	5·61	R.	5·69	R.	5·89	R.	5·59
Marlborough ..	M.	6·60	M.	7·21	Hb.	7·12	Hb.	7·29	Hb.	6·86
Westland ..	R.	5·46	R.	5·75	R.	5·94	R.	5·92	R.	5·93
Canterbury ..	M.	6·99	O.	7·28	Hb.	7·31	Hb.	7·29	Hb.	7·08
Otago ..	M.	6·90	M.	6·98	M.	6·87	M.	6·71	R.	6·71
Southland ..	R.	7·27	R.	6·79	R.	6·90	R.	6·65	R.	6·53
Dominion ..	R.	7·31	R.	7·58	R.	7·32	R.	7·45	R.	7·25

* In 1915–16 flock sheep were classified as "Merino" and "Others" only. In 1916–17 flock sheep were classified according to predominating strain, but no provision was made for "Half-breds."

Consumption and Export of Mutton and Lamb.

Figures showing sheep and lambs slaughtered for food purposes during each of the last ten years, together with the exports of frozen mutton and lamb, are given in the tables following:—

Sheep.

Year ended 31st March.	Sheep slaughtered for Food Purposes.		Frozen Mutton exported.	
	Number.	Approximate Weight.	Number of Carcases, including Pieces at 60 lb. to a Sheep.	Weight.
		Cwt.		Cwt.
1911	3,372,150	1,806,509	2,193,665	1,068,881
1912	3,189,527	1,708,675	1,867,828	912,926
1913	3,306,588	1,771,386	2,208,330	1,092,692
1914	4,019,831	2,153,570	2,557,639	1,271,935
1915	3,999,460	2,139,889	2,522,448	1,244,399
1916	4,018,578	2,152,809	2,939,611	1,498,843
1917	3,601,284	1,929,259	2,409,899	1,228,696
1918	3,631,344	1,945,363	2,150,505	1,118,014
1919	4,381,005	2,346,967	1,300,047	680,732
1920	5,512,482	2,953,116	4,127,853	2,097,678
Total for 10 years	39,032,249	20,907,543	24,277,825	12,214,796

Lambs.

Year ended 31st March.	Lambs slaughtered for Food Purposes.		Frozen Lamb exported.	
	Number.	Approximate Weight.	Number of Carcases.	Weight.
		Cwt.		Cwt.
1911	4,044,953	1,301,056	3,839,922	1,167,980
1912	3,192,108	1,026,034	3,093,091	932,835
1913	3,505,986	1,126,924	2,956,249	901,146
1914	4,338,180	1,394,415	3,854,348	1,186,698
1915	4,471,861	1,597,093	3,692,003	1,120,682
1916	4,091,085	1,314,991	3,750,590	1,152,736
1917	3,431,943	1,103,125	2,797,290	838,569
1918	2,695,443	866,392	2,048,612	623,022
1919	2,950,316	948,315	916,914	277,822
1920	3,280,601	1,054,478	3,420,220	1,070,340
Totals for 10 years	36,002,476	11,732,823	30,369,239	9,271,770

In addition to the figures of slaughterings given above there are the killings by farmers for their own use. During the 1919–20 season farmers killed 671,136 sheep and 57,529 lambs for food, and on the basis of these figures it is estimated that about 5,500,000 sheep, representing a weight of 330,000,000 lb., and 500,000 lambs, of a weight of 18,000,000 lb., were killed by farmers for local consumption during the ten years shown. This gives a total of approximately 1,350,000,000 lb., equal to an average annual consumption per head of population, including Maoris, of over 120 lb.

Sheep in Australasia.

The number of sheep in the Australian States and in New Zealand for the years 1900, 1905, 1910, 1915, and 1918 was as follows :—

	1900.	1905.	1910.	1915.	1918.
Queensland ..	10,339,185	12,535,231	20,331,838	15,950,154	18,220,985
New South Wales	40,020,506	39,506,764	45,560,969	32,874,359	37,243,770
Victoria ..	10,841,790	11,455,115	12,882,665	10,545,632	15,773,902
South Australia*	5,283,247	6,339,542	6,324,717	3,744,747	6,683,804
Western Australia	2,434,311	3,120,703	5,158,516	4,831,727	7,183,747
Tasmania ..	1,683,956	1,583,561	1,788,310	1,624,450	1,841,924
Federal Territory	..	..	..	134,679	138,104
New Zealand† ..	**19,355,195**	**19,130,875**	**23,996,126**	**24,788,150**	**25,828,554**
Total, Australasia	89,958,190	93,671,791	116,043,141	94,493,898	112,914,790

* Including Northern Territory. † Figures for April following.

Sheep Flocks of the World.

According to the Year-book of the International Institute of Agriculture at Rome, the following figures represented the latest information (1916) available as to the number of sheep in the various countries concerned at the time of the publication of the volume. The figure shown for France does not include the number of sheep in territory occupied by the enemy at the time of the enumeration, while that for Turkey covers both Turkey in Europe and Turkey in Asia.

Country.	Number of Sheep.	Country.	Number of Sheep.
Argentina	81,485,149	Austria-Hungary ..	8,987,959
Russia	76,404,792	Algeria	8,810,739
Australia	69,244,603	Bulgaria	8,632,388
United States of America	48,483,000	Brazil	7,204,920
South African Union ..	35,710,843	British East Africa Protectorate	6,555,000
British India ..	31,443,727	Roumania ..	5,269,493
United Kingdom ..	28,770,692	Germany	5,073,478
Turkey	27,094,678	French Morocco ..	4,715,371
New Zealand ..	**24,788,150**	Chile	4,557,800
Spain	16,012,277	Serbia	3,818,997
Italy	13,824,000	Portugal	3,072,988
Uruguay	11,482,251	Canada	1,965,101
France	10,845,280		

Wool.

Wool is the most important product of New Zealand. In normal years the value of the export is over a third of the value of the total exports of the Dominion, the figures for 1918 and 1919 being,—

	1918. £	1919. £
Wool (New Zealand produce) ..	7,527,266	19,559,537
Total exports of New Zealand produce	27,894,619*	53,304,384

* Exclusive of gold (specie and bullion).

The quantity of wool exported in 1919 was 274,246,613 lb., an increase of 165,522,038 lb. as compared with the quantity exported in the previous year. The annual production of wool for the past twenty years, taking the

exports for the twelve months immediately preceding the commencement of shearing, and adding thereto the quantity used in the Dominion for manufacturing purposes, is shown in the next table, but no addition has been made for wool on sheep-skins exported, nor for loss in scouring and washing.

Year ended 30th September.	Quantity exported.	Quantity purchased by Local Mills.	Total.
	lb.	lb.	lb.
1900	144,829,515	3,223,392	148,052,907
1901	143,064,789	4,629,924	147,694,713
1902	155,652,563	4,203,312	159,855,875
1903	160,919,693	5,294,652	166,214,345
1904	141,031,699	5,191,451	146,223,150
1905	146,889,767	3,651,343	150,541,110
1906	152,765,232	4,372,472	157,137,704
1907	164,006,579	4,116,722	168,123,301
1908	163,930,722	4,779,198	168,709,920
1909	187,619,181	5,202,821	192,822,002
1910	194,472,934	5,642,113	200,115,047
1911	184,854,149	6,048,164	190,902,313
1912	189,553,723	6,284,114	195,837,837
1913	195,353,533	6,823,545	202,177,078
1914	196,499,896	6,846,960	203,346,856
1915	208,908,118	6,628,019	215,536,137
1916	200,119,016	8,772,467	208,891,483
1917	162,043,634	7,590,445	169,634,079
1918	110,054,315	7,488,932	117,543,247
1919	258,363,524	6,720,400	265,083,924

The following summary is interesting as showing the various classes of wool purchased by the New Zealand mills. For 1918–19 greasy wool represents over 98 per cent. of the total. More than half of the wool used at mills is shown to be half-bred, less than one-third crossbred, and slightly less than one-fifth merino.

CLASS OF WOOL PURCHASED BY WOOLLEN-MILLS, 1918–19.

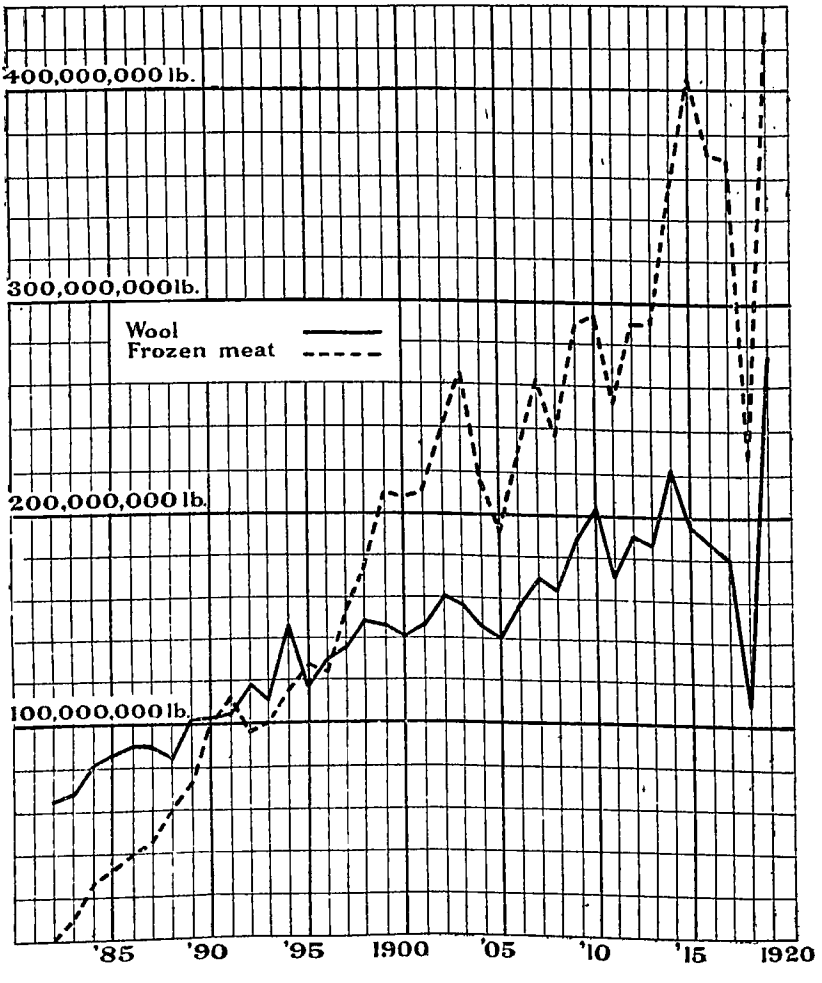
	Merino.	Half-bred.	Crossbred.	Totals.
	lb.	lb.	lb.	lb.
Greasy	1,207,655	3,526,471	1,870,171	6,604,297
Washed	..	687	3,826	4,513
Scoured .. .	9,520	4,245	17,078	30,843
Sliped	..	6,622	74,125	80,747
Totals, 1918–19	1,217,175	3,538,025	1,965,200	6,720,400
Totals, 1917–18	1,623,417	3,653,914	2,211,601	7,488,932

The percentages of greasy, scoured, and washed wool to the total quantities exported during the last ten years are,—

Year.	Greasy. Per Cent.	Scoured and sliped. Per Cent.	Washed. Per Cent.	Year.	Greasy. Per Cent.	Scoured and sliped. Per Cent.	Washed. Per Cent.
1910 ..	83·48	16·27	0·25	1915 ..	78·62	21·09	0·29
1911 ..	80·63	19·16	0·21	1916 ..	79·27	20·24	0·49
1912 ..	80·96	18·77	0·27	1917 ..	81·77	18·07	0·16
1913 ..	83·28	16·43	0·29	1918 ..	77·92	21·21	0·87
1914 ..	83·45	16·28	0·27	1919 ..	71·78	28·07	0·15

The following diagram shows the increase in the weight of wool exported since 1882, also the great expansion of the frozen-meat trade in the same period. The decrease during the war period is attributable to lack of shipping facilities.

EXPORTS OF WOOL AND FROZEN MEAT, 1882–1919.



CATTLE.

Most of the leading breeds of the cattle of Great Britain are represented in the Dominion by herds bred on sound lines, though the beef-breeds of later years are not making much headway owing to the advance taking place in dairying operations. There are still very many fine Short

horn herds of the beef type, while Aberdeen-Angus and Hereford cattle are also bred. There are herd-books for each of these breeds.

The breeding of dairy cattle has made considerable progress in recent years. A special Jersey herd-book has been in existence for some time, and herd-book societies are now well established for the Friesian, Ayrshire, and Milking Shorthorn breeds as well. The various societies have heartily co-operated in a scheme for establishing registers of merit in connection with purebred dairy cattle, giving a great fillip to the breeding of purebred dairy stock. The ordinary dairy-farmer is encouraged to use purebred bulls and thereby to assist materially in raising the standard of the dairy stock of the country. He is now coming to appreciate the value of herd-testing work, and thus, knowing the really profitable cows in his herd, will be anxious to secure a bull which will enable them to perpetuate their good qualities.

An important factor responsible for the improved position of dairy cattle in New Zealand is the milking-machine, which is making the farmer more independent of hired labour. The farms generally are on a fairly large scale, but with the increasing price of land there is a gradual tendency towards smaller farms and the keeping of fewer but better cows. Also, there is a growing realization of the necessity of a more liberal system of feeding, particularly in the direction of growing special fodder crops to maintain the milk-flow at all seasons of the year. Generally, dairy-farming in New Zealand is being conducted on a sound and profitable basis, and the outlook for the industry is most encouraging.

A policy which has been partly responsible for placing the breeding of dairy cattle on up-to-date principles has been the establishment of purebred herds at three of the State experimental farms, and there breeding them according to an exact record of performance. High-priced stock have been imported in order that the foundation herds at the farms may be of the best quality. The milk of all the cattle is daily weighed and periodically tested, official check tests being conducted by experts of the Dairy Division of the Agriculture Department. The yearling bulls from these State milk-record herds command high values. The appreciation of the farming community for this officially tested stock has been chiefly responsible for the gratifying manner in which private breeders of pedigree stock have participated in the official register-of-merit scheme of the Department and the herd-book societies. In the season of 1910–11 the Department established a model herd-testing association in the Wairarapa district, carrying out the work of testing and of recording results free of all charge to the farmers taking part. This had the effect of creating at once wide interest in the important herd-testing movement, and the following season model associations were established in several leading dairying districts. This was intended not only to demonstrate the value of herd-testing when properly conducted and with full comparative records published at the end of the season, but also to encourage farmers to establish co-operative testing associations on their own account. The object was achieved, and many associations are now in operation.

Details for 1920 for each land district are given in the next table.

TABLE SHOWING DETAILS OF CATTLE FOR EACH LAND DISTRICT IN THE DOMINION AS AT 31ST JANUARY, 1920.

Land District (including Interior Boroughs).	Dairy Cattle.				Other Cattle.						Total Cattle.
	Bulls of all Ages.	Cows and Heifers over Two Years Old.		Total Dairy Cattle.	Bulls of all Ages.	Cows and Heifers over Two Years Old.	Heifers under Two Years Old.	Steers over Two Years Old.	Steers under Two Years Old.	Total other Cattle.	
		In Milk.	Dry.								
North Auckland ..	6,105	109,165	17,559	132,829	1,557	55,306	90,414	63,438	68,704	279,419	412,248
Auckland	8,839	178,661	27,989	215,489	1,766	68,961	129,369	102,554	99,122	401,772	617,261
Hawke's Bay ..	1,728	40,307	7,014	49,049	5,690	150,382	94,056	87,593	78,744	416,465	465,514
Taranaki	7,044	148,186	9,190	164,420	1,096	30,868	80,065	40,001	41,456	193,486	357,906
Wellington ..	6,063	124,230	17,530	147,823	5,032	127,512	117,394	126,674	91,198	467,810	615,633
Totals, North Island	29,779	600,549	79,282	709,610	15,141	433,029	511,298	420,260	379,224	1,758,952	2,468,562
Nelson	971	17,381	3,583	21,935	205	7,462	12,458	8,652	9,191	37,968	59,903
Marlborough ..	626	10,113	1,543	12,282	218	5,733	8,812	5,907	7,015	27,685	39,967
Westland	426	8,132	1,940	10,498	203	7,350	8,065	7,518	6,927	30,063	40,561
Canterbury ..	3,305	60,009	8,976	72,290	492	19,854	40,389	27,920	32,303	120,958	193,248
Otago	2,356	40,007	7,182	49,545	551	15,539	28,969	17,499	22,221	84,779	134,324
Southland ..	2,682	46,566	8,191	57,439	1,044	22,535	34,708	22,176	27,478	107,941	165,380
Totals, South Island	10,366	182,208	31,415	223,989	2,713	78,473	133,401	89,672	105,135	409,394	633,383
Totals, Dominion	40,145	782,757	110,697	933,599	17,854	511,502	644,699	509,932	484,359	2,168,346	3,101,945

The total number of cattle in the Dominion at the enumeration of 1920 was 3,101,945, as against 3,035,478 in 1919. The comparative figures for the two years, according to the classification in use, are as follows :—

	1919.	1920.
Dairy cattle—		
Bulls of all ages	37,453	40,145
Cows and heifers two years old and over	826,135	893,454
Other cattle—		
Bulls of all ages	19,253	17,854
Cows and heifers two years old and over	520,361	511,502
Heifers under two years old	634,550	644,699
Steers two years old and over ..	459,186	509,932
Steers under two years old	538,540	484,359
Totals	3,035,478	3,101,945

The greater proportion of the increase in cattle appears in the Auckland (including North Auckland), and Wellington Land Districts. Hawke's Bay and Westland are the only land districts showing a decrease on the previous year's figures. The figures for each district are as follows :—

Land District.	Increase.	Decrease.	Land District.	Increase.	Decrease.
Auckland (incl. Nth. Auckland)	26,045	..	Westland ..	..	1,481
Hawke's Bay ..	..	13,498	Canterbury ..	4,031	..
Taranaki ..	8,082	..	Otago	1,705	..
Wellington ..	38,719	..	Southland ..	81	..
Nelson ..	1,115	..	Total increase ..	66,467	..
Marlborough ..	1,668	..			

Out of a total of 3,101,945 cattle, the North Island is shown to have had 2,468,562 or 79·58 per cent., while the South Island had 633,283, or 20·42 per cent. The dairy cows and heifers intended for dairying in the North Island numbered 679,831, or 76·09 per cent., and in the South Island 213,623, or 23·91 per cent.

Consumption of Beef.

The following table shows the number and weight of cattle slaughtered for food purposes in each of the past ten years, together with the weight of beef exported :—

Year ended 31st March.	Cattle slaughtered for Food Purposes.		Weight of Frozen Beef exported.
	Number.	Approximate Weight.	
		Cwt.	Cwt.
1911	286,256	2,044,686	500,022
1912	237,696	1,697,829	210,629
1913	259,935	1,856,679	260,880
1914	299,409	2,139,529	325,593
1915	347,353	2,481,093	716,289
1916	369,647	2,640,336	750,938
1917	385,129	2,750,921	1,008,689
1918	341,300	2,437,857	882,982
1919	355,357	2,538,264	804,512
1920	413,206	2,951,471	576,054
Totals for 10 years ..	3,295,288	23,538,665	6,036,588

In addition to these figures there were 3,810 bullocks and cows and 2,780 calves slaughtered by farmers for local consumption during the year ended the 31st January, 1920.

Breeds of Cattle.

In connection with the enumeration of live-stock in 1918 information was collected as to breeds of cattle, horses, and pigs in addition to the usual details of age, sex, &c. A summary of the results of this enumeration as regards cattle is given below. More detailed information giving particulars according to land districts will be found in the 1918 issue of this book.

A similar detailed collection will be made in connection with the 1921 population census.

Table showing Details of Cattle in the Dominion on 31st January, 1918, classified according to Breed, Sex, and Age.

Breed.	Bulls of All Ages for Stud.	Cows and Heifers over Two Years Old.	Heifers under Two Years Old.	Steers over Two Years Old.	Steers under Two Years Old.	Total Cattle.
Purebred—						
Jersey	2,048	2,774	1,337	14	55	6,228
Alderney	2	3	..	..	..	5
Friesian (Holstein) ..	1,082	1,939	920	16	76	4,033
Ayrshire	318	659	339	..	3	1,319
Shorthorn	1,550	2,624	903	63	100	5,240
Hereford	1,455	2,575	913	47	3	4,993
Polled Angus	538	846	304	325	92	2,105
Devon	22	10	..	..	..	32
Other breeds	21	41	25	..	..	87
Crossbred with predominating strain of—						
Jersey and other Channel Island breeds	5,823	214,144	98,146	6,629	30,505	355,247
Friesian (Holstein) ..	5,542	90,168	54,470	10,752	37,110	198,042
Ayrshire	1,053	29,677	12,201	1,349	5,536	49,816
Shorthorn	23,068	675,057	335,131	296,282	330,736	1,660,274
Hereford	5,188	109,139	55,244	64,191	55,700	289,462
Polled Angus	2,669	58,817	26,757	30,062	26,873	145,178
Other (dairy cattle) ..	315	39,238	14,326	3,084	9,814	66,777
Other (beef cattle) ..	193	14,809	8,277	15,448	11,062	49,789
Totals	50,887	1,242,520	609,793	423,262	507,165	2,838,627
Boroughs	1,048	20,199	6,671	1,069	1,851	30,838
Grand totals.. ..	51,935	1,262,719	616,464	429,331	509,016	2,869,465

Dairy-produce.

The Dairy Industry Act, 1908, a consolidation of previous legislation, provides for the appointment of inspectors of dairy stock and factories or other places used for the manufacture of dairy-produce, and power is given to condemn or forbid their use, if necessary. The sale of unwholesome milk or other dairy-produce is prohibited, and provision is made for the inspection, grading, and shipping of all such produce exported. Provision is made for the framing of regulations for the registration of dairies, licensing of persons carrying on the manufacture or sale of the produce, registration of trade-marks or brands, and for inspection and grading. A fine not exceeding £50 may be inflicted for any offence under this part of the Act.

Authority is given for State advances to dairy companies, on the security of their assets, for the purposes of acquiring land or of erecting buildings and machinery for carrying on the manufacture of dairy-produce. Loans are repayable by equal half-yearly instalments within fifteen years, and bear interest at the rate of 5 per cent. per annum.

The Act also provides for the registration of co-operative dairy companies, and shareholders are protected in the event of certain contingencies.

A short amending Act was passed in 1915, but does not affect the main points of the measure as summarized.

The census of industrial manufacture showed that during the year ended 31st March, 1919, 509,093 cwt. of butter was produced by butter-factories in the Dominion. The quantity exported during this period amounted to 429,627 cwt.

Returns from cheese-factories give the quantity manufactured during the twelve months ended 31st March, 1919, as 1,054,090 cwt.

The number of butter and cheese factories in each district as in April, 1920, with the previous season's output for export, is next given. The districts shown do not in all cases correspond exactly with the land districts of the same name.

District.	Number of Factories.		Forwarded for Export, 1919-20.		Number of Suppliers.	
	Butter.	Cheese.	Butter.	Cheese.	Butter.	Cheese.
			Tons.	Tons.		
Auckland	53	51	10,424	10,553	10,609	1,153
Hawke's Bay	10	23	472	2,390	1,694	655
Taranaki	26	116	2,699½	26,048	1,776	3,028
Wellington	20	70	1,368	10,557	2,442	1,846
Nelson	7	5	357	347	579	130
Marlborough	4	7	121	806	362	238
Westland	8	4	259	189	499	74
Canterbury	12	16	887½	1,557	3,986	524
Otago and Southland ..	14	92	448½	8,288	3,207	2,841
Totals, 1920 ..	154	384	17,036¼	60,735	25,154	10,489
Totals, 1919 ..	214	384	..	..	..	..
" 1918 ..	162	402	..	..	..	..
" 1917 ..	164	392	..	..	..	..
" 1916 ..	173	381	..	..	..	..
" 1915 ..	167	330	..	..	..	..
" 1914 ..	181	293	..	..	..	..
" 1913 ..	174	276	..	..	..	..
" 1912 ..	172	224	..	..	..	..
" 1911 ..	185	218	..	..	..	..
" 1910 ..	189	194	..	..	..	..

In addition to the above, in April, 1920, there were 7 private dairies for butter and 28 packing-houses.

The total export of butter and cheese in the past twenty years, and the total quantity of each commodity sent to the United Kingdom, are tabulated below :—

Year.	Total Export of Butter.	Butter exported to the United Kingdom.	Total Export of Cheese.	Cheese exported to the United Kingdom.
	Cwt.	Cwt.	Cwt.	Cwt.
1900	172,583	165,871	102,849	81,908
1901	201,591	170,903	104,294	74,510
1902	253,998	170,207	74,746	50,825
1903	285,106	249,016	74,780	64,661
1904	314,360	299,171	84,526	82,046
1905	305,722	282,275	88,562	85,653
1906	320,225	306,739	131,206	129,321
1907	328,441	314,081	236,833	234,517
1908	229,971	211,242	280,798	276,212
1909	321,108	301,693	400,607	398,619
1910	356,535	345,400	451,915	449,167
1911	302,387	283,505	439,174	435,616
1912	378,117	316,857	577,070	572,562
1913	372,258	288,224	611,663	608,933
1914	434,067	361,381	863,776	859,986
1915	420,144	371,959	817,258	803,917
1916	358,632	336,412	949,416	942,773
1917	254,397	250,721	885,751	865,152
1918	431,023	415,250	883,445	844,198
1919	345,818	336,606	1,572,355	1,517,102

Exports of butter to countries other than the United Kingdom in 1919 include 6,000 cwt. to Canada, and 39,796 and 14,973 cwt. to Egypt and India respectively.

The quantities of butter and cheese exported continued about equal till the close of the year 1895. During the period 1896–1907 butter assumed the lead, reaching its maximum of comparative importance in 1903, in which year the export was nearly four times that of cheese. A remarkable rise then took place in the cheese exports, and the increase in the exports continued so rapidly that 1917 saw the quantity of cheese more than treble that of butter.

Horses.

The number of horses is shown for seven census years,—

Census Years.	Number of Horses.	Numerical Increase.	Increase per Cent.
1886	187,382	..	..
1891	211,040	23,658	12·63
1896	237,418	26,378	12·50
1901	266,245	28,827	12·14
1906	326,537	60,292	22·65
1911	404,284	77,747	23·81
1916	371,331	−32,953*	−8·15*

* Decrease.

As previously stated, particulars as to breeds of horses were obtained at the enumeration of 1918, and detailed tables giving particulars by land districts were published in that year's issue of this volume. A summarized table is subjoined.

TABLE SHOWING DETAILS OF HORSES IN THE DOMINION ON 31ST JANUARY, 1918, CLASSIFIED ACCORDING TO BREED, SEX, AND AGE.

Breed.	Stallions for Stud.	Geldings Two Years Old and Over.	Dry Mares Two Years Old and Over.	Mares with Foal at Foot or to foal this Season.	Fillies under Two Years Old.	Colts or Geldings under Two Years Old.	Other Horses, and Horses unspecified.	Total Horses.
Thoroughbred ..	407	1,772	1,895	928	637	511	177	6,327
Draught	922	72,299	64,116	6,905	7,971	6,452	1,022	159,687
Other (harness and saddle)	408	76,707	71,144	8,281	8,701	7,083	5,897	178,221
Ponies under 14 hands	123	3,753	4,083	505	459	413	568	9,904
Totals ..	1,860	154,531	141,238	16,619	17,768	14,459	7,664	354,139
Boroughs	158	11,080	6,875	622	406	3,022	1,748	23,911
Grand totals ..	2,018	165,611	148,113	17,241	18,174	17,481	9,412	378,050

In addition there were 253 asses and mules in the Dominion, classified as follows:—

Stallions for stud	17	Other asses and mules, and asses and mules unspecified ..	13
Geldings over two years old ..	124		
Dry mares over two years old ..	63	Total	237
Mares with foal at foot or to foal this season	7	Boroughs	16
Fillies under two years old ..	5		
Colts or geldings under two years old	8	Grand total ..	253

There were 346,407 horses in the Dominion on 31st January, 1920, being a decrease of 16,781 on the total for the previous year. The following table gives details by land districts:—

Land District (including Interior Boroughs).	Stallions for Stud.	Geldings Two Years Old and Over.	Dry Mares Two Years Old and Over.	Mares with Foal at Foot or to foal this Season.	Fillies under Two Years Old.	Colts or Geldings under Two Years Old.	Other Horses, and Horses unspecified.	Total Horses.
North Auckland	183	19,294	16,055	939	847	1,096	1,042	39,456
Auckland ..	278	22,787	19,865	1,821	1,695	1,835	1,421	49,702
Hawke's Bay ..	303	16,186	13,940	1,685	1,459	1,489	1,472	36,534
Taranaki ..	99	11,124	10,469	486	513	534	273	23,498
Wellington ..	248	21,179	19,543	1,696	1,529	1,760	1,732	47,687
Nelson ..	27	3,713	3,773	268	207	254	106	8,348
Marlborough ..	37	3,118	3,097	248	273	260	78	7,111
Westland ..	15	1,263	1,169	84	86	101	59	2,777
Canterbury ..	244	28,827	26,035	2,130	1,846	1,858	2,746	63,686
Otago ..	150	16,738	15,695	1,202	1,148	1,355	2,212	38,500
Southland ..	90	12,968	12,780	921	904	898	547	29,108
Totals ..	1,674	157,197	142,421	11,480	10,507	11,440	11,688	346,407

Additional information in regard to horses over two years old was also collected for the first time in 1919. Horses over two years old were classified in three classes—(1) Draught; (2) spring-cart or light artillery; and (3) light (including thoroughbred and trotting). This information is available only in respect of holdings that are over one acre in extent and that are not situated within borough boundaries. The number of horses included in this classification at the 31st January, 1920, was 300,258, of which 126,554 were draught and 95,100 light, whilst spring-cart or light artillery horses numbered 78,604.

The following table gives details by land districts:—

HORSES OVER TWO YEARS OLD, 31ST JANUARY, 1920.

Land District (excluding Interior Boroughs).	Draught.	Spring-cart or Light Artillery.	Light (including Thoroughbred and Trotting).	Total Horses over Two Years Old.
North Auckland	7,398	11,520	14,232	33,150
Auckland	14,427	14,386	14,795	43,608
Hawke's Bay	8,731	6,749	15,973	31,453
Taranaki	5,175	8,864	6,960	20,999
Wellington	11,491	13,957	14,609	40,057
Nelson	2,522	2,395	1,955	6,872
Marlborough	3,089	1,662	1,493	6,244
Westland	555	949	626	2,130
Canterbury	35,446	9,178	12,125	56,749
Otago	19,977	5,645	6,865	32,487
Southland	17,743	3,299	5,467	26,509
Totals	126,554	78,604	95,100	300,258

Asses and mules numbered 262 as at the 31st January, 1920, being an decrease of 34 on the figures for 1919.

PIGS AND GOATS.

There were 258,694 pigs in the Dominion on the 31st January, 1918. The following table shows the classification by breeds:—

Breed.	Boars of All Ages for Stud.	Sows of All Ages used or intended for Breeding.	Other Pigs.	Total Pigs.
Pure Berkshire	3,990	13,137	49,483	66,610
Pure Yorkshire	552	2,064	4,600	7,216
Other purebred pigs	219	1,115	3,066	4,400
Crossbred pigs	1,838	16,692	156,508	175,038
Totals	6,599	33,008	213,657	253,264
Boroughs	116	632	4,682	5,430
Grand totals	6.715	33,640	218,339	258,694

As regards the numbers of pigs in recent years, a decrease of 23,347 was recorded between 1918 and 1919, but a recovery of 31,482 was shown between 1919 and 1920. Details by land districts for 1920 are as follow:—

Land District (including Interior Boroughs).	Boars of All Ages for Stud.	Sows of All Ages used or intended for Breeding.	Other Pigs.	Total Pigs.
North Auckland	1,094	5,242	29,569	35,905
Auckland	1,538	8,206	42,679	52,423
Hawke's Bay	423	2,386	13,249	16,058
Taranaki	1,337	6,180	34,526	42,043
Wellington	1,184	6,929	31,638	39,751
Nelson	252	1,238	7,715	9,205
Marlborough	146	770	4,900	5,816
Westland	97	487	2,689	3,273
Canterbury	814	4,992	35,231	41,037
Otago	335	1,670	12,123	14,128
Southland	160	864	6,166	7,190
Totals	7,380	38,964	220,485	266,829

During the ten years ended the 31st March, 1920, 1,979,612 pigs were slaughtered in New Zealand for food purposes, the weight of pork, bacons, and hams being 2,296,350 cwt. During this period, roughly, 20,000 cwt. of hams and bacons were exported leaving over 99 per cent. for home consumption.

Figures showing the slaughter for each of the ten years are given below:—

Year ended 31st March.	Number of Pigs.	Weight of Pork, Bacon, and Hams.	Year ended 31st March.	Number of Pigs.	Weight of Pork, Bacon, and Hams.
		Cwt.			Cwt.
1911 ..	163,307	189,553	1916 ..	219,041	254,244
1912 ..	232,091	269,391	1917 ..	202,834	235,432
1913 ..	192,407	223,330	1918 ..	179,540	208,395
1914 ..	191,797	222,622	1919 ..	155,960	181,024
1915 ..	241,683	280,525	1920 ..	200,952	233,104

The number of Angora goats in the Dominion on the 31st January, 1920, was 5,477, a decrease of 969 since 1919. Other goats decreased by 1,391 during the period, the number in 1920 being 9,087.

POULTRY.

The number of poultry in New Zealand at the taking of the 1916 census was ascertained to be 3,468,000, a decrease of 225,137 from the number for the year 1911 (3,693,137).

Details as to kind, age, and sex, and a comparison with previous years, are given below:—

—	1916.			Total, 1916.	Total, 1911.	Total, 1906.
	Reared in a Previous Season.		Reared in Current Season.			
	Male Birds.	Female Birds.				
Fowls ..	198,056	2,308,928	634,370	3,141,354	3,215,031	2,784,269
Ducks ..	32,907	145,399	42,502	220,808	329,230	281,999
Turkeys ..	13,268	37,315	5,938	56,521	97,933	77,101
Geese ..	9,231	20,791	16,933	46,955	45,389	44,300
Other poultry	..	..	..	2,362	5,554	3,935

In the North Island 74,848 householders owned 1,866,608 poultry, in the South Island (including Stewart Island and Chatham Islands) the numbers were 59,313 and 1,596,024 respectively, and in other adjacent islands 73 and 3,006. These figures are exclusive of poultry other than fowls, ducks, turkeys, and geese.

Bee-farming.

Bees were first introduced into New Zealand in 1839, and after early vicissitudes bee-farming has steadily increased. The census returns of 1916 show that there were 8,244 households keeping bees in the Dominion, the number of colonies being 57,540. During 1919 the amount of honey exported was 1,701,801 lb., valued at £59,846.

The Department of Agriculture maintains four apiary instructors and inspectors who give practical instruction in management, preparation of products for market, &c. The grading of honey for export is now compulsory.

Regulations have been gazetted under the Apiaries Amendment Act, 1913, requiring all beekeepers to make application to the Director of the Horticulture Division, Department of Agriculture, for registration of their apiaries. Re-registration was to be effected in 1920, and every third year thereafter. In the case of apiaries being established or transferred from one beekeeper to another, application for registration of such establishment or transfer must be made within twenty-one days of such establishment or transfer.

SECTION XVII.—FORESTRY.

NEW ZEALAND possesses a large variety of trees in its native forests, there being no fewer than eighty-six different species known to botanists. The majority of these are, unfortunately, through various causes, of little use for commercial purposes to any great extent, and, as a matter of fact, the following trees are practically the staple supply of the timber trade: Kauri, totara, rimu (red-pine), kahikatea (white-pine), matai (black-pine). The puriri, miro, silver-pine, and the various birches (or beeches, as they should be properly designated) are the only other trees which are used to any extent for general purposes.

Most of the indigenous trees suitable for conversion into marketable timber are slow of growth, and the steps that have been taken in regard to New Zealand forests have been in the direction of conserving the existing supply as far as practicable, while allowing sawmilling to proceed under conditions that ensure the greatest possible use being made of the timber.

One of the earlier methods of inducing the planting of suitable trees was by means of "land grants"—a settler being given a free grant of Crown land if he planted a certain portion of his freehold land in suitable trees. Several large plantations may be seen in North Canterbury that were established by means of this method.

In 1896 a Forestry Branch of the Department of Lands was started, and three nurseries were established—two at Tapanui and Ranfurly, in the Otago District of the South Island, and the other at Whakarewarewa, near Rotorua, in the North Island. Later on another nursery was formed at Hanmer, in the Canterbury District (South Island). The establishment of nurseries in certain other localities was also undertaken, but from various causes these other nurseries have been discontinued.

In 1919, however, the urgent needs of the rapidly dwindling forest resources impelled the inauguration of a progressive forest policy. A Department of Forestry was created, and the services of a trained and experienced Director were secured. The establishment will also include qualified research officers, forest inspectors, rangers, &c. It is proposed to establish a School of Forestry, which, with the provision of a professorial chair in Forestry at one of the University Colleges, will supply means for the training of students in scientific forestry.

Section 34 of the War Legislation and Statute Law Amendment Act, 1918, confers power upon the Commissioner of State Forests to purchase and hire sawmills and machinery, to cut and sell timber in State forests, and to purchase private lands for addition to or production of State forests. The Governor-General in Council is empowered to set aside by Proclamation any Crown lands as and for "provisional forests." Up to 31st March, 1920, some 3,311,000 acres of Crown lands and 56,066 acres of national-endowment lands were proclaimed provisional State forests.

State Nurseries and Plantations.

During the year ended 31st March, 1920, some 11,724,000 trees were raised in the State nurseries at Rotorua, Tapanui, Ranfurly, and Hanmer Springs.

From the inauguration in 1896 up to March, 1920, State nurseries have raised 116,695,000 trees, of which 95,164,000 were sent to State plantations and 5,642,000 to other places. The total expenditure on nurseries in the same period was £181,239.

In the year 1919-20, 1,952 acres were planted with 2,625,000 trees in State plantations. Some 1,085,500 trees were in addition used to replace losses in areas previously planted.

In March, 1920, the eighteen State plantations had 77,458,500 trees in their 37,110 acres. The largest plantations are situated at Waiotapu, Whakarewarewa, Kaingaroa Plains, Conical Hills, Hanmer Springs, Naseby, and Puhipuhi. Total expenditure on plantations, 1896-1920, amounted to £333,397. The average cost per acre planted was, in the case of the six largest plantations, approximately £4 7s.

State Forests.

The Commissioner of State Forests, who is the Ministerial head of the Forestry Department, has control over State forests proclaimed under the State Forests Acts, and certain forest reserves made under the Land Act prior to 1885. The total area is approximately 1,660,000 acres, of which about 1,450,000 acres are under forest, but only 365,000 carry kauri, rimu, white-pine, matai, totara, or miro in sufficient quantity to be of any commercial value at the present time.

In addition to this total is the 3,367,000 acres of proclaimed "provisional" State forest lands mentioned previously.

National-endowment lands are forest-clad to the extent of 2,200,000 acres, about 400,000 acres of this area being milling forest. Reserves under the Land Act, Public Works and other Acts carry 370,000 acres of forest. Only 37,000 acres of this is classed as milling forest. Scenic reserves carry much valuable timber, but, of course, it is highly desirable to preserve this in its natural state. National parks contain a large area under forest, mostly of poor milling quality.

The total area of forest now owned by the State is about 10,500,000 acres, but of this area the total area of forest at present of milling value is approximately only 1,370,000 acres, and a portion of this is already subject to milling licenses. As the area of the whole Dominion is sixty-six million acres, it will be seen that the total area of forest still owned by the State is less than 16 per cent. of the total, whilst the area of milling forest owned by the State is only 2·08 per cent. It may be concluded that most of the forest on private and Native lands (of which there is no information as regards the forest area) will be cut down in a few years' time.

TREE-PLANTING BY FARMERS.

The Government's proposal to assist farmers in tree-planting was authorized by section 69 of the Reserves and other Lands Disposal and Public Bodies Empowering Act, 1915, and the sum of £1,000 was voted by Parliament to cover expenses in connection with raising and supplying the trees.

The total number of trees disposed of to farmers and local bodies during the year was 256,714.

Returns collected in 1919 show that the total area of plantations belonging to farmers was 48,981 acres.

TIMBER-PRODUCTION.

Information supplied by the Board of Trade shows that the total output of all timbers during the year 1919–20 was, in superficial feet, as follows: Rimu; 145,584,203; white-pine, 82,419,821; kauri, 22,598,391; totara, 14,414,298; matai, 17,820,597; beech, 9,650,344; taraire, 174,650: pukatea, 200,000; tanekaha, 54,238: silver-pine, 50,000; blue-gum, 80,000; kahikawaka, 50,000; *Pinus insignis*, 3,064,201: or a total of all kinds of 296,165,080 superficial feet.

The Dominion's timber-production is at present more than sufficient for home requirements. A considerable quantity of Oregon pine and Australian hardwoods is imported, but is more than balanced by a much larger export, principally of white-pine, rimu, and kauri. During the year ended 31st March, 1920, some 16,867,642 superficial feet of timber, valued at £278,273, was imported. The chief varieties were: Oregon pine (sawn, rough), 2,889,801 superficial feet, value £26,982; ironbark (logs and sawn timber), 3,101,575 superficial feet, value £58,398; and jarrah (logs and sawn timber), 4,199,964 superficial feet, value £49,610. Exports amounted to 53,725,002 superficial feet, of a value of £484,945, including white-pine, 34,827,162 superficial feet (£317,150); rimu, 12,125,889 superficial feet (£96,135); and kauri. 3,719,610 superficial feet (£45,763).

SECTION XVIII.—FISHERIES.

Up to the present time New Zealand's fisheries can scarcely be said to have attained to national importance. With a few exceptions, the fishing-grounds so far worked have been those within easy reach of the principal centres. Beyond them is an immense extent of grounds, a few sections of which have been partly prospected, but of the greater part practically nothing is known regarding the value and extent of its fish-supply.

Marine Fish-hatchery.

A site for a marine fish-hatchery was selected at Purakanui, Otago, in 1900, but this being found unsuitable for its intended purpose, another site was chosen at Portobello, in Otago Harbour. The erection of the hatchery was carried out by a Board set up to superintend the work of the hatchery, funds being provided by the State, and grants being made by a number of societies. The State makes an annual grant towards the maintenance of the hatchery.

Prior to the war experiments were carried out with a view to introducing English food-fishes to New Zealand waters, and these are believed to have been fairly successful as regards the three species dealt with so far—viz., lobsters, edible crabs, and turbot. Much valuable work has also been done in the direction of hatching the spawn of various indigenous fishes and in making a study of their life habits.

Oyster-picking.

The principal oyster-beds round the coast of New Zealand are those situated in Foveaux Strait, between South and Stewart Islands, and the rock-oyster beds on the east and west coasts of the Auckland peninsula. The Foveaux Strait beds are very extensive. During the 1919 season 21,394 sacks of oysters, valued at £13,371, were picked from these beds.

A step towards conserving the rock-oyster beds of Auckland was taken in 1908, when the picking of rock-oysters from the North Island beds was undertaken by the State, private picking being prohibited. A table is given showing the quantity and value of oysters picked and sold by the State during each of the last five years.

Season.	Oysters sold.	Prices realized.	Cost of Picking and Selling.
	Sacks.	£	£
1915	9,396	6,715	5,475
1916	8,172	5,693	4,282
1917	10,357	6,890	5,819
1918	10,422	7,517	6,822
1919	7,256	5,331	..

Most of the rock-oysters are marketed in Auckland, the price per sack charged there last season being 13s. 6d. Parcels of four and one-half dozen are sold at 1s., and parcels of sixteen dozen at 3s. 6d.

Various attempts were made about fifteen years ago to form artificial oyster-beds, but none of these met with success. A further attempt to plant rock-oysters in the Marlborough Sounds has been made, and, so far as can be seen, this has resulted successfully.

Whaling.

In the earlier part of the nineteenth century New Zealand was the centre of an important whale-fishery, many whaling-stations being established in the North of Auckland and in Cook and Foveaux Straits. The industry gradually declined in importance until at present only two or three stations remain. The whales caught are almost all of the hump-back variety. At Whangamumu, North Auckland, a whaling-steamer, fitted with the most modern appliances for killing and handling whales, has been placed in commission, and a very serviceable whaling plant has been established. Sixty-one were taken last season in this locality, yielding 300 tons of oil and 56 tons of bonedust, of a total value of £10,300. Whaling operations are also carried on from Kaikoura and Tory Channel, in Marlborough. The value of the product of the Marlborough whale-fisheries in 1919 (275 tons of oil) was £9,345, the number of whales caught being fifty-eight.

Seals.

A close season for seals existed in New Zealand from the end of August, 1894, until 1913, but owing to poaching, which it was found impossible to stop, the seals did not increase to any great extent. It was proposed a few years ago to grant licenses for the right to take seals, one of the conditions of which was that a royalty should be paid on each skin. Tenders were invited for the licenses, but none were received. At present the taking of seals is prohibited.

Inland Fisheries.

As early as 1867 attempts were made to introduce English brown trout into New Zealand. The first attempt was not successful, but from ova imported in the two following years and hatched at Opoho the bulk of the trout now inhabiting the streams and lakes of the Dominion have descended. In later years Loch Leven and Scottish brown trout were introduced, as also rainbow trout, perch, carp, and tench.

Various attempts were made to introduce Atlantic salmon, sockeye salmon, quinnat salmon, and whitefish into New Zealand. Quinnat salmon proved the most successful, and they are now firmly established as an adjunct to the Dominion's fresh-water fisheries. The fish have now extended along the east coast as far as the Waiau-ua River in the north and the Taieri in the south.

Very fine trout-fishing is obtained in New Zealand, especially in the lakes of the North Island. Under the direction of the Conservator of Fish

and Game, operations are carried out in the Taupo and Rotorua districts with a view to the improvement of fishing generally. Special attention is given to the destruction of ill-conditioned fish, the destruction of shags, the study of the habits of the fish, procuring of fresh food-supplies, &c.

Trout from Lakes Taupo, Rotorua, and Roto-iti are now marketed by the Government. In the 1919–20 season, which was from varying causes a particularly bad one, some 16½ tons of fresh and 3¼ tons of smoked trout were disposed of.

A fish-hatchery is also maintained in this district, and in the last year 1,475,000 rainbow-trout ova and 578,000 fry were liberated in the rivers and lakes of the North.

Municipal Fish-markets.

Municipal fish-markets have been established at Wellington and Auckland with a view to bringing the fisherman and the public into closer contact, and enabling the former to dispose of his catch at a figure which ensures a good return to himself and is reasonable from the point of view of the public.

Auckland.

The market is under the management of a Markets Committee appointed by the City Council. The office and premises are situate at Hobson Street Wharf, where the two Municipal trawlers discharge their loads of fish. Two motor-lorries are engaged delivering the fish to the various hotels and fish-shops in Auckland City and suburbs, while an increasing trade is also being done with country districts. At the market facilities are provided for handling and treating fish, and for the performance of necessary work in connection with the industry.

The market is open from 6 a.m. to 5 p.m. daily, and a night staff is provided for receiving, cleaning, and smoking fish for the next day's business. The sales at the wholesale market for the year ended 31st March, 1920, totalled £21,763. In addition, at the retail premises in Queen Street, conducted by a manager, four salesmen, cashier, and oyster-opener, the turnover was £14,390.

The quantity of fish brought in by the Municipal trawlers (including one under contract) was 23,727 baskets (100 lb. each) of mixed fish, largely snapper.

Wellington.

For several years the Municipal Fish-market was conducted by the City Corporation in a building situated on Jervois Quay, near the water-front. The building is now conducted as a shop only.

Fishing-boats Licensed.

The registration and licensing of fishing-boats and of boats engaged in taking oysters was made compulsory in July, 1904. A table is appended showing the number licensed, and the number of fishermen employed, at the various ports of the Dominion.

Name of Port.	Number of Fishing-vessels.	Number of Fishermen employed.	Name of Port.	Number of Fishing-vessels.	Number of Fishermen employed.
Hokianga ..	9	15	Kaikoura ..	23	48
Russell	42	90	Rangiora ..	18	22
Whangarei ..	10	15	Lyttelton and Sumner	17	25
Kaipara ..	27	45	Akaroa	13	26
Auckland ..	26	84	Southbridge ..	24	30
Thames ..	60	50	Kaiapoi and Styx	24	24
Tauranga ..	29	20	Timaru	20	32
Gisborne ..	26	51	Oamaru ..	9	13
Napier	73	140	Mocraki ..	25	34
New Plymouth ..	34	58	Dunedin and Port Chalmers	83	149
Wanganui ..	17	18	Invercargill ..	4	6
Foxton	13	13	Bluff	57	100
Wellington ..	86	208	Stewart Island ..	25	51
Picton	18	25	Chatham Islands	13	14
Blenheim ..	10	16			
Nelson	62	20			
Westport ..	14	10			
Greymouth ..	14	22	Totals ..	928	1,588
Hokitika ..	3	104*			

* One hundred of these employed whitebaiting without boats.

Statistics of Fisheries.

Provision exists in the Fisheries Act, 1908, whereby owners of boats and fish-curers may be required to make returns to the Marine Department in such form and in such manner as may be prescribed by the Governor-General in Council, but advantage of this provision has not yet been taken to enable information to be collected as to quantity of fish caught.

A table has been compiled by the Chief Inspector of Fisheries showing the various kinds of fish caught and the approximate quantity and value of fish landed at the different fishing-ports for the year ended 31st March, 1920. The figures are as follows:—

Port.	Kinds of Fish caught.	Quantity.	Total Value.
		Cwt.	£
Hokianga ..	Mullet, snapper, flounder, and kahawai ..	Not supplied.	
Russell ..	Mullet, snapper, flounder, hapuku, kingfish, tarakihi, and kahawai	3,450	3,100
Whangarei ..	Snapper, mullet, flounder, hapuku, and red cod	800	1,500
Kaipara ..	Mullet, flounder, snapper, trevally, and gurnard	8,220	9,736
Auckland ..	Snapper, flounder, mullet, trevally, kahawai, john-dory, gurnard, kingfish, and hapuku	63,400	80,413
Thames ..	Snapper, flounder, sole, kahawai, garfish, and crayfish	17,136	20,392
Tauranga ..	Snapper, hapuku, trevally, kahawai, rock-cod, garfish, herring, kingfish, flounder, and crayfish	120	250

Port.	Kinds of Fish caught.	Qauntity.	Total Value.
		Cwt.	£
Gisborne ..	Tarakihi, snapper, sole, and flounder ..	2,169	5,160
Napier.. ..	Sole, flounder, brill, snapper, gurnard, butterfish, hapuku, moki, trumpeter, ling, barracouta, kingfish, trevally, warehou, and crayfish	17,479	30,036
	Crayfish, cockle, and pipi	750*	900
New Plymouth ..	Snapper, hapuku, blue cod, flounder, ling, gurnard, kahawai, herring, and crayfish	200	175
Wanganui ..	Blue cod, hapuku, snapper, flounder, kahawai, mullet, barracouta, and gurnard	375	850
Foxton ..	Flounder, snapper, and whitebait ..	200	560
Wellington ..	Snapper, hapuku, hake, kingfish, warehou, moki, tarakihi, gurnard, butterfish, blue cod, kahawai, flounder, sole, and crayfish	17,100	23,940
Picton ..	Groper, moki, barracouta, flounder, sole, brill, herring, trevally, kingfish, blue cod, red cod, snapper, butterfish, ling, tarakihi, warehou, gurnard, kahawai, and crayfish	2,100	2,600
Blenheim ..	Blue cod, rock-cod, red cod, snapper, garfish, moki, ling, flounder, sole, tarakihi, butterfish, kahawai, groper, whitebait, and crayfish	530	800
Nelson ..	Snapper, flounder, sole, moki, butterfish, blue cod, gurnard, and kahawai	820	935
	Crayfish	300†	
Westport ..	Snapper, blue cod, kahawai, herring, flounder, sole, hapuku, crayfish, and whitebait	1,456	3,036
Greymouth ..	Sole, hapuku, red cod, snapper, flounder, and whitebait	124	241
Hokitika ..	Whitebait, herring, kahawai, flounder, mackerel, and snapper	895½	4,185
Kaikoura ..	Groper, trumpeter, kingfish, ling, butterfish, and blue cod	7,232	14,000
Rangiora ..	Whitebait, flounder, herring, and red cod	95½	1,093
Lyttelton and Sumner	Groper, ling, red cod, conger-eel, flounder, sole, trevally, herring, garfish, butterfish, moki, and barracouta	9,500	13,300
Akaroa ..	Groper, blue cod, red cod, trevally, moki, butterfish, flounder, sole, ling, tarakihi, and barracouta	3,900	5,380
	Crayfish	400*	
Southbridge ..	Flounder, herring, and red cod	4,159	5,823
Kaiapoi and Styx	Whitebait and flounder	340	2,000
Timaru ..	Groper, sole, flounder, brill, ling, red cod, barracouta, and gurnard	3,000	6,100
Oamaru ..	Groper, red cod, blue cod, moki, warehou, barracouta, ling, flounder, and gurnard	3,274	2,882
Moeraki ..	Groper, red cod, blue cod, moki, warehou, barracouta, and ling	3,095	3,592
	Crayfish	248*	

* Sacks. † Dozen.

Port.	Kinds of Fish caught.	Quantity.	Total Value.
		Cwt.	£
Dunedin and Port Chalmers	Groper, kingfish, ling, barracouta, blue cod, red cod, moki, trumpeter, bream, tarakihi, trevally, mullet, garfish, kahawai, gurnard, solo, flounder, brill, and skate	40,980	49,176
Invercargill ..	Flounder, mullet, red cod, trout, and whitebait	1,033	1,434
Bluff	Blue cod, red cod, groper, flounder, trevally, and moki	6,587	12,997
Stewart Island ..	Blue cod, trevally, trumpeter, groper, and moki	3,891½	5,155
Chatham Islands	Blue cod, and hapuku	3,148½	2,863
	Totals	219,392	315,205

In addition, the produce of the oyster-fisheries was valued at £18,702, and of the whale-fisheries at £19,645.

Included in New Zealand produce exported during the past five years were,—

Item.	1915.	1916.	1917.	1918.	1919.
	£	£	£	£	£
Fish	37,166	37,475	23,818	19,202	17,377
Oysters	2,057	1,340	244	1,114	342
Whalebone	250	280	..	..	..
Whale-oil	3,011	1,647	5,511	12,618	22,908
Other products of fisheries	2,412	1,751	201	25	..
Totals	44,896	42,493	29,774	32,959	40,627

The value of fish imported in 1919 was £121,599.

SECTION XIX.—MINING.

NEW ZEALAND has been described by an eminent geologist as a mineralized rather than a mineral country, for although in no other country of equal size are indications of a greater number of economic minerals to be found, yet, with the exception perhaps of iron-ore, the known mineral reserves are not great in comparison with those in many other countries, and the value of our mineral production is incomparable with that of our pastoral products. The life of our coalfields has been estimated by the Director of Geological Survey at under one hundred years. However, in the almost unrivalled resources of water-power from our mountain rivers and streams suitable for the production of hydro-electric power New Zealand possesses an inexhaustible resource of continuously increasing value, which will be still available when the coalfields of the world are exhausted.

The gold-mining industry, which in its early stages contributed greatly to the progress and settlement of New Zealand, has for a number of years continued to decline in importance, in common with most other gold-producing countries. The causes of such decline are found in the approaching exhaustion of the most accessible known alluvial-gold deposits, the exhaustion of ore from the zones of secondary enrichment, and the increased cost of material and labour.

The quantities and values of metals and minerals entered for exportation, also the coal-output during the years 1918 and 1919, and the total value since 1853, are,—

	1919.		1918.		Total Value since 1853.
	Oz.	£	Oz.	£	£
Gold	320,210	1,334,405	11,987	42,391	88,128,359
Silver	453,567	103,037	879,383	171,456	2,561,285
	Tons.		Tons.		
Quicksilver ..	8⅔	4,619	4½	2,122	6,741
Copper-ore ..	..	12	..	6	19,390
Chrome-ore ..	..	..	..	..	38,002
Antimony-ore ..	..	..	13	104	55,045
Manganese-ore ..	..	..	..	..	61,905
Hæmatite ore ..	..	..	..	..	469
Tungsten-ore ..	131	29,489	169⅛	37,922	297,933
Sulphur (crude)	..	..	..	..	13,241
Mixed minerals ..	1,090	4,039	2,286¾	5,772	241,367
Coal	1,847,848	2,693,163	2,034,250	2,530,677	30,284,646
Kauri-gum ..	4,128	255,812	2,419	157,313	18,581,064
Shale	..	..	..	..	7,236
Coke	45	113	70	146	25,625

From 1st January, 1853, to 31st December, 1919, the value of the mineral production of the Dominion is estimated by the Mines Department at £140,322,308, of which the precious metals, gold and silver, claim £90,689,644.

GOLD-MINING.

Gold-mining operations in New Zealand are divided into three branches, viz.: (1) Quartz-mining, (2) alluvial mining, and (3) dredging.

	Production of Bullion (all Mines).		Dividends paid (by Registered Companies only).		Number of Persons ordinarily employed.	Number of productive Mines and Dredges.
	1919.	1918.	1919.	1918.	1919.	1919.
	£	£	£	£		
Quartz-mining ..	574,021	743,731	118,831	193,519	1,423	37
Dredges ..	47,838	63,691	2,845	4,925	138	19
Alluvial mining ..	80,273	78,895	2,068	4,953	432	131
Totals ..	702,132	886,317	123,744	203,397	1,993	187

As regards dredges and alluvial mining, the bullion-production is from all dredges and claims, whereas the dividends paid are only obtainable from those few which are owned by registered companies.

QUARTZ-MINING.

The most important gold-mining operations in New Zealand consist in the working of quartz lodes and the extraction of the precious metals therefrom. Quartz-mining is conducted in the North Island in the Ohinemuri County, and to a less extent in the Thames and Coromandel Counties. The mountain ranges and hills of andesite and other volcanic rocks which form the Hauraki Goldfields are intersected by lodes containing gold and silver. In the South Island quartz-mining operations are carried on in the Reefton and Blackwater districts, also to a small extent in the Wakamarina Valley (Marlborough). In Otago the only quartz-mining operations of importance are in connection with the working of quartz-mines in which scheelite is associated with gold.

ALLUVIAL-GOLD MINING.

Alluvial gold is found chiefly on the west coast of the South Island and in Otago, where mining operations have been conducted over an area of 17,000 square miles.

GOLD-DREDGING.

This system of gold-mining, which originated in New Zealand, is rapidly declining in importance, the number of productive dredges having decreased from 167 during 1906 to nineteen during 1919. Gold-dredging is at present confined to Otago, Southland, and Westland.

Gold-production of Australia and New Zealand.

The value of the gold-yield of Australia and New Zealand is quoted in the next table:—

	1900. £*	1905. £*	1910. £*	1915. £*	1917. £*	Total to End of 1917. £*
New South Wales	1,071	1,165	802	563	349	61,999
Victoria ..	3,230	3,174	2,423	1,398	857	298,652
Queensland ..	2,871	2,517	1,875	1,060	761	82,112
South Australia	82	97	54	30	34	3,799
West Australia..	6,008	8,306	6,247	5,140	4,122	133,888
Tasmania ..	316	312	157	79	62	8,674
New Zealand ..	**1,440**	**2,094**	**1,896**	**1,695**	**904**	**86,752**
Totals ..	15,018	17,665	13,454	9,965	7,089	675,876

* Thousands omitted; figures are given to nearest £1,000.

Gold-production of the World.

The following figures showing the world's gold-production are taken from the Statistical Abstract of the United States:—

Year.	Fine Ounces.	Year.	Fine Ounces.
1899	14,837,775	1909	21,965,111
1900	12,315,135	1910	22,022,180
1901	12,625,527	1911	22,348,313
1902	14,354,680	1912 . ..	22,549,335
1903 . .	15,852,620	1913	22,249,596
1904	16,804,372	1914	21,240,416
1905 . ..	18,396,451	1915	22,674,568
1906 . ..	19,471,080	1916	21,970,788
1907	19,977,260	1917	20,289,456
1908	21,422,244	1918	18,427,232

Silver.

Nearly the whole of the silver-production of New Zealand, amounting in value at the end of 1919 to £2,561,285, was obtained from the refinement of bullion from the quartz-mines, principally from those of the Hauraki Goldfield, where the two precious metals are found alloyed as an electrum, the ratio of the two metals in the alloy varying greatly. No other silver-mining operations have been carried out profitably in this country.

Iron-ores.

Iron-ore occurs in New Zealand at Parapara, Golden Bay; on the seashore in Taranaki; at Kerr Point and Waitangi River, North Auckland; in the Raglan-Kawhia district; on Mount Peel, Nelson; on Mount Royal, near Palmerston North; on Table Hill, near Milton; in the Lake Wakatipu district; and in the Mount Cook district, Westland.

The most extensive iron-ore deposits occur at Parapara, Golden Bay, in the Nelson Province, where it is estimated that the amount of limonite-ore on the surface exceeds 63,000,000 tons; but in the absence of any thorough system of prospecting this estimate must be regarded as inconclusive.

Samples of outcrop ore taken from the Parapara deposit some years ago were found to contain 51·38 per cent. of metallic iron. By means of prospecting-drives during 1913 more definite information concerning the ore was obtained, and the samples analysed showed the percentage of metallic iron to be 45·02.

Along the seashore from Patea to New Plymouth occur large quantities of magnetic ironsand more or less titaniferous. This has originated through the disintegration of hornblende-andesites and their tufas, which occur very extensively near New Plymouth around the volcanic cone of Mount Egmont. It is quite impossible to give any definite idea of the quantity of this ironsand; undoubtedly, however, it exists in immense quantities, and is measurable in millions of tons.

The most extensive deposit of ironsand occurs near Patea, the quantity of which has been estimated to be at least 5,374,000 tons of high-grade ore in addition to a great quantity of low-grade ironsand.

At Kerr Point the deposit of iron-ore consists of limonite, but does not probably exceed 100,000 tons. The iron-ore near the head of the Waitangi River is also limonite of excellent quality, but does not exceed 100,000 tons. The limonite deposits in the Kawhia-Raglan district and on Table Hill, so far as known, are not large. Little authentic information exists concerning the iron-ore deposits at Mount Peel or at Mount Royal. In the Lake Wakatipu district from Moke Creek, through Benmore in the direction of Mount Gilbert, a band of hæmatite has been reported to occur, also at Maori Point, Shotover River. On the Westland side of Mount Cook large quantities of magnetite are disseminated through chlorite schist.

TUNGSTEN-ORE.

Scheelite, one of the principal ores of tungsten, is mined at the gold-scheelite-quartz mines near Glenorchy, Paradise, Macrae's, Stoneburn, Hyde, and Barewood, Otago; also at Wakamarina Valley, Marlborough; at which places milling and concentrating plants have been installed.

The quantity of tungsten-ore exported during 1919 amounted to 131 tons, valued at £29,489, as compared with 169 tons, valued at £37,922, in 1918.

COPPER.

Ores of copper are found in New Zealand in no fewer than thirty-two localities, but during the past fifty years attempts at their successful exploitation have been unprofitable, the total recorded copper-production at the end of 1919 amounting in value to only £19,390. Prior to the inauguration of systematic records there was a considerable production from mines on Great Barrier and Kawau Islands.

Copper-mines have also been worked on the Dun Mountain, near Nelson. Underground prospecting has been carried on near Kaeo, Whangaroa; at Maharahara, near Woodville; and at Mount Radiant, near Karamea; but no conclusive results have been obtained.

MANGANESE-ORE.

Manganese-ore has been found at Otau, Wairoa, Bay of Islands, Purua Bay, Mangapai, Otonga, Waiheke Island, and Taieri Mouth. The total quantity of manganese-ore exported to the end of 1919 amounted to 19,364 tons, value £61,905.

CINNABAR.

After several unsuccessful attempts, extending over a number of years, to work our cinnabar-deposits in the Auckland Province, satisfactory and profitable results have been obtained by the New Zealand Quicksilver-mines (Limited), whose mine and furnace are situated at Puhipuhi, about twenty-eight miles by road from Whangarei. This company produced in 1919 11,175 lb. of quicksilver, valued at £2,794. It is hoped that this branch of mining will show considerable expansion.

For the purpose of encouraging the cinnabar-mining industry the Government on the 1st August, 1917, published in the *New Zealand Gazette* a notice that, subject to certain conditions, a bonus of 4d. per pound would be paid on the first 100,000 lb. of marketable quicksilver produced in New Zealand.

TIN.

Cassiterite in the form of "stream-tin" occurs near Port Pegasus, Stewart Island, where it has been worked to some extent. "Lode-tin" has been found in the same locality, and is now being prospected. Small quantities of cassiterite have also been detected in the stream-gravels of the Reefton, Greymouth, and Westport districts. Among other localities in which traces of tin occur are Wet Jacket Arm (Otago) and Campbell Island.

PLATINUM.

In the published lists of minerals of New Zealand platinum is stated to occur in several places associated generally with gold in gravel. It is only from Southland, however, that platinum has been mined and exported. No record is available of the amount produced to date.

SULPHUR.

Native sulphur in sufficient quantity to be profitably worked is known to occur only in the thermal districts of the North Island, near Rotorua and Lake Taupo, and at White Island. With the exception of the small lake deposit on White Island, all the known native sulphur in payable quantity occurs in the form of pockets in pumice, or sinter around fumaroles or thermal springs (from which it has been sublimed in crystalline form), and as black sulphur. The small quantity of sulphur now extracted is used in the chemical works of the Dominion.

COAL.

Coal, varying in grade from anthracite to lignite, occurs in many parts of New Zealand. In proportion to the present yearly consumption of somewhat under 2,500,000 tons (10 to 15 per cent. of which is in normal times imported), the supply may be considered relatively large, but in comparison with probable future needs it is decidedly small. It is likely, indeed,

that the proved coal resources of the Dominion will be practically exhausted within a hundred years.

The following is an estimate of the proved and probable coal in New Zealand by the Director of the Geological Survey of New Zealand:—

Class of Coal.	Proved.	Probable.	Possible.
	Imperial Tons.	Imperial Tons.	
Anthracite	Very little ..	Very little ..	Small.
Bituminous	187,000,000	477,000,000	Moderate.
Semi-bituminous	68,000,000	196,000,000	Moderate.
Brown	194,000,000	728,000,000	Large.
Lignite	161,000,000	420,000,000	Large.
Totals..	610,000,000	1,821,000,000	Large.

The output of coal in each inspection district may be summarized as follows:—

Class of Coal.	Output of Coal during 1919.				Total Output to End of 1919.
	Northern District.	West Coast District.	Southern District.	Total.	
	Tons.	Tons.	Tons.	Tons.	Tons.
Bituminous and semi-bituminous	115,390	845,717	..	961,107	32,132,112
Brown	393,841	109	290,381	684,331	15,164,488
Lignite	2,220	..	200,190	202,410	2,744,088
Totals for 1919 ..	511,451	845,826	490,571	1,847,848	50,040,688
Totals for 1918 ..	549,778	997,089	487,383	2,034,250	48,192,840

The following statement shows the tons of coal and shale raised persons employed, lives lost by accidents in or about coal-mines, &c.:—

Year.	Output.	Persons employed above and below Ground.	Tons raised per each Person employed Underground.	Lives lost.		
				Per Million Tons raised.	Per Thousand Persons employed.	Number by Accident.
1910	2,197,362	4,599	634	7·28	3·55	16
1911	2,066,073	4,290	706	6·77	3·26	14
1912	2,177,615	4,328	681	4·13	2·08	9
1913*	1,888,005	4,250	590	3·18	1·38	6
1914	2,275,614	4,734	639	21·53	10·35	49†
1915	2,208,624	4,156	711	4·07	2·16	9
1916	2,257,135	3,988	750	2·65	1·50	6
1917	2,068,419	3,983	715	1·93	1·00	4
1918	2,034,250	3,994	703	2·95	1·50	6
1919	1,847,848	3,944	648	5·41	2·53	10

* All the principal collieries were rendered idle by the strike during November and December.
† Year of Ralph's (Huntly) explosion.

The decline in the annual output for 1919 amounts to over 9 per cent. from even the low output of 1918.

The annual report for the year 1919 of the Inspecting Engineer of Mines states:—

"The decline in the annual output was chiefly due to restriction of work by miners at the principal collieries. The output per person employed below ground has declined from 750 tons during 1916 to 648 tons during 1919.

"The number of operative collieries was 138, of which the 16 most productive won 1,375,789 tons, being an average of 641 tons per person employed below ground; the 122 smaller collieries, where little or no restriction occurred, produced 472,059 tons, being an average of 671 tons per person employed below ground. As the principal collieries are better developed and equipped for a larger production per miner than are the smaller collieries, the fact that the latter have produced more coal per miner during 1919 appears to be conclusive evidence as to the chief cause of the decline of coal-output for the Dominion."

State Coal-mines.

The gross capital expenditure on the State coal-mines up to the 31st March, 1920, amounted to £446,700, and no less than £231,340 of this amount has now been written off out of profits for depreciation, &c. The present net book value of permanent or fixed assets is £209,106.

Owing to the approaching exhaustion of the present Point Elizabeth State Mine it has become necessary to secure another suitable colliery to take its place.

An area of coal-bearing land at Waikokowai, in the Waikato district, has recently been purchased by the Government for the establishment of a State colliery, which it is proposed to develop forthwith.

A valuable extension of the Point Elizabeth coal-measure has recently been proved in the low coastal hills to the north of the Point Elizabeth Colliery towards Nine-mile Creek. This area also is now being developed for a State colliery. The coal-seam has been proved by boring to cover an area of at least 250 acres, and averages 8ft. in thickness, and is probably identical with that mined at Point Elizabeth.

The output from the Point Elizabeth and Liverpool State collieries during 1919 was 45,885 tons and 121,710 tons respectively. The Point Elizabeth Colliery was finally closed in March, 1920, having yielded since its inception a gross total of 2,453,884 tons. The State coal business during the financial year 1919–20 resulted in a profit of £21 as compared with £30,607 in the previous year.

Petroleum.

Drilling for petroleum has been carried on in Taranaki, Hawke's Bay, Canterbury, and Westland. Petroleum of good quality but in limited quantity has been proved at Moturoa, but up to the present time boring for petroleum in the Dominion has only attained a small and intermittent flow.

Oil-prospecting operations throughout the Dominion have received very liberal financial assistance from the Government in the forms of bonus, subsidies, and loans.

KAURI-GUM.

During 1919 4,128 tons of kauri-gum, valued at £255,812, were exported, the total quantity and value of gum exported to the end of 1919 being respectively 360,420 tons, and £18,581,064.

Since 1917 progress has been made in the development of the kauri-peat oil-extraction. Plants are being installed by two companies—viz., the New Zealand Peat-oils Company (Limited), who propose to operate on 3,000 acres at Kaimaumau, north of Mangonui, and by the Parenga Gumfields (Limited), who will shortly commence operations at Redhill, Northern Wairoa, upon 6,000 acres. It is proposed to refine from the crude oil motor-spirit (benzine), paint-oil, and varnish-oils, with the residuum pitch.

Two new processes—viz., the "salt vacuum" and "sand-blast"—for treating small and large pieces of gum respectively will also, it is hoped, tend to the recrudescence of the kauri-gum industry.

The European market for this fossil resin—used in the manufacture of varnish and linoleum—being greatly restricted by the present war, new but smaller markets have been obtained. The Kauri-gum Industry Act, 1914, providing for State purchase of gum from diggers and the disposal of the gum, has served a useful purpose in enabling the industry to keep going in spite of the disorganization occasioned by the war.

PHOSPHATE ROCK.

Deposits of phosphate rock occur in many parts of the Dominion. From a commercial standpoint the only good area known is that at Clarendon, Otago, where 116,522 tons were produced to the end of 1919, the output for the last year being 4,000 tons.

GREENSTONE.

The mineral nephrite, the "pounamu" of the Maori, more popularly known as one of the varieties of "greenstone," whenever observed *in situ*, occurs as rounded segregations in talc or talc-serpentine rocks. So far as known, the mineral has only been found in its original *locus* in the Griffin Range, Turiwhate Survey District, North Westland.

BUILDING AND ORNAMENTAL STONES.

New Zealand possesses a great variety of handsome and durable building-stones scattered throughout both Islands. In Auckland there is basalt, andesite, porphyrite, and quartz biotite-diorite, known in the building trade as Coromandel "granite," a hard, coarsely crystalline rock capable of taking a fine polish. Besides these rocks are the Whangarei limestone and Raglan stone, the former an excellent building-stone, the latter a good freestone. Taranaki has the hornblende andesites of New Plymouth and Mount Egmont, and Wellington the andesites of Ruapehu.

In Nelson there is the granite of Tata Island and Tonga Bay and the marble and crystalline limestones of the Pikikiruna (Riwaka) Range. Marble of fine quality from a quarry on the last-named range is now

being used for the new Parliamentary Buildings at Wellington. West Nelson and Westland are well provided with granites and limestones of good quality, well adapted for building purposes; and in the Griffin Range, North Westland, there is found an abundance of finely coloured serpentine, unsurpassed as a decorative stone. Building-stone is scarce in Marlborough, but Canterbury is well supplied, having an abundance of Lyttelton bluestone (andesite) and Mount Somers stone, a limestone of exceptional quality. In Otago there is an abundance of excellent building-stone, ranging from the well-known Oamaru stone to the granite, gneiss, and limestones of Fiordland, all close to deep water. In Southland there is the so-called Ruapuke "granite," the norite of the Bluff, and the granites of Stewart Island.

In 1919 219 quarries were working under the Stone-quarries Act. Some 1,409 persons were ordinarily employed in these quarries, and the output was 1,056,239 tons, of which building-stone amounted to 27,051 tons.

Accidents at Mines and Quarries.

The number of fatal accidents in or about the mines and quarries of the Dominion is low, and compares favourably with other countries.

Year.	Coal-mines.		Metal Mines.		Stone-quarries (under Act).	
	Number of Deaths.	Proportion per 1,000 Persons employed.	Number of Deaths.	Proportion per 1,000 Persons employed.	Number of Deaths.	Proportion per 1,000 Persons employed.
1915 ..	9	2·16	10	2·38	2	1·27
1916 ..	6	1·50	9	2·42	2	1·23
1917 ..	4	1·00	7	2·03	2	2·00
1918 ..	6	1·50	2	0·77	2	1·40
1919 ..	10	2·53	4	1·82	1	0·71

The total number of persons employed in mining in 1919 was 7,554: 3,944 being in coal-mines, 2,201 in metal mines, and 1,409 in quarries under the Stone-quarries Act. The corresponding total for 1918 was 8,029, and for 1917, 7,995.

State Aid to Mining.

During the year ended 31st March, 1920, thirty-eight approved prospecting parties were granted subsidies amounting to £3,554, of which £1,520 was expended during the year.

As an aid towards the development of the mining industry the Government offers varied and liberal assistance to prospectors in the form of subsidies, loans, expert and technical advice, use of plant, &c. Subject to the provisions of the Mining Act, the holder of a valid miner's right is entitled to prospect for gold and any other metal or mineral (except coal) on any Crown land. He may also obtain authority from the Governor-General to prospect on Native land, and he may also prospect on private land with the consent of the owner. Details of assistance offered to prospectors will be found in the 1919 issue of the Year-book.

Loans for the Development of Mines.

Advances by way of loan of a sum not exceeding £20,000 may be made by Government to any company or person for carrying on mining operations.

Subsidized Roads on Goldfields.

The expenditure on roads and tracks by subsidies and direct grants during the financial year ended the 31st March, 1920, amounted to £13,096.

Government Water-races.

The Waimea–Kumara and Mount Ida water-races, which render possible hydraulic mining in the Kumara district, Westland, and the Naseby district, Central Otago, supplied thirty-seven miners with water for sluicing during 1919, by which gold to the value of about £8,180 was obtained.

For the year ended 31st March, 1920, the sum received for water sold amounted to £1,398, and the expenditure on the upkeep of the races amounted to £4,056.

The capital expenditure upon these races exceeds £250,000, and, as the expenditure in maintenance has for some years exceeded the cash received for water sold, no interest on capital or depreciation has been provided.

Government Prospecting Drills.

Prospecting-drills of various types suitable for the conditions existing in the Dominion are lent to *bona fide* prospectors free of all charge except that of maintenance in good order and condition; as security for which a deposit of £50 is required. The Government will pay the salary of the expert drill superintendent who has charge of the drill, and when diamond drills are used will bear half the cost of diamonds (carbons) used. The hirer is required to furnish to the Mines Department weekly journals of boring-results.

After many years' experience of Government drills as an aid to the mining industry it may be positively stated that no other class of State aid to mining has been so satisfactory. During 1919 an aggregate of 71 holes were drilled and a total depth amounting to 9,534 ft. attained by Government drills, with varying results.

Further information regarding these drills may be obtained upon application to the Under-Secretary, Mines Department, Wellington.

Schools of Mines.

There are Government subsidized schools of mines at Coromandel, Thames, Waihi, Karangahake, Huntly, Westport, and Reefton.

For the year ended 31st March, 1920, the expenditure by the Mines Department on schools of mines amounted to £4,505.

Board of Examiners.

Examinations are held by the Board of Examiners annually of candidates for certificates as first-class and second-class mine-managers, battery-superintendents, and dredgemasters under the Mining Act, 1908, and for certificates as first-class and second-class mine-managers, underviewers, and firemen and deputies under the Coal-mines Act, 1908.

Coal-miners' Relief Fund.

As required by the Coal-mines Act, 1908, the owner of every coal-mine contributes ½d. per ton on all coal sold, for the relief of coal-miners who may be injured whilst working, and for the relief of families of coal-miners who may be killed or injured. The proceeds of this levy are administered partly by the Public Trustee, under the above title, and partly by miners' medical associations, under the title of "Sick and Accident Fund."

Miner's Phthisis Act.

For particulars of Miners' Pensions see under section dealing with Pensions, Superannuation, &c.

SECTION XX.—WATER-POWER.

ALTHOUGH abundant water-power is available throughout New Zealand, comparatively little use had been made of it before 1900, but since then the development has been extensive, and promises to be still more extensive in the early future. In 1903 water-power to the extent of 9,911 horse-power was actually in use. By 1913 this amount had risen to 34,956 horse-power, and in 1920 to 47,983. Recently interest in hydro-electric power has been accentuated by the partial failure, from various causes, of the coal-supply and the high cost of imported coal.

The Public Works Act of 1908 vests the sole right to use the water-power of the Dominion in His Majesty, subject to any existing rights, and gives the Government the right to develop such power, or to delegate such power to any local authority, or, outside a mining district, to any person or company, subject to conditions. Advantage has been taken of this in several cases, the right in the case of local authorities being issued subject to a royalty of 1s. per year per kilowatt of maximum output, and in the case of private concerns developing water-power for electrical distribution, subject to a royalty of 4s. per year per kilowatt of maximum output.

POWER IN USE.

The following table shows the actual horse-power in use in the various districts at the 31st March, in the year indicated:—

	1915.	1916.	1917.	1918.	1919.	1920.
Auckland ..	12,933	12,153	15,206	15,113	15,473	15,423
Hawke's Bay ..	9	35	55½	90	94	109
Taranaki ..	2,853	2,968	3,122	3,255	3,374	3,120
Wellington ..	663	711	713	749	844	859
Marlborough ..	174	291*	127¼*	88*	120*	153
Nelson ..	640	583†	554½†	548†	546†	
Westland ..	3,595	3,579	3,609	3,611	3,611	4,141
Canterbury ..	9,682	9,642	9,040½	12,468	12,455	11,491
Otago	10,555	10,735	10,789	10,625	10,504	10,715
Southland ..	1,912	1,921	1,925	1,939	1,949	1,972
Totals ..	43,016	42,618	45,141¾	48,487	48,970	47,983

* Including Nelson North. † Excluding Nelson North, now included in Marlborough.

It will be observed from these figures that progress in the last two or three years has been exceedingly slow, in fact the amount quoted for 1920 is somewhat less than that of the two years immediately preceding. In large part this has been due to the difficulty of obtaining the necessary machinery, but, as reference to the latter portion of this section will show, the schemes under way or to be commenced in the near future will have the effect of creating a considerable improvement in this respect.

The following table gives the analysis of the purposes for which water-power was employed as on the 31st March, 1920:—

WATER-POWER IN USE ON THE 31ST MARCH, 1920.

District.	Electric Supply.	Mining.	Flax-mills.	Sawmills.	Flour-mills.	Dairying.	Construction-works.	Freezing-works.	Paper-mills.	Miscellaneous.	Totals.
Auckland North	2,680	..	..	..	..	20	..	..	..	5	2,705
Auckland.. ..	695	2,111	21	4	..	16	298	10	..	70	3,225
Auckland South	9,420	..	60	..	..	3	..	..	..	10	9,493
Hawke's Bay ..	46	..	..	15	..	29	..	..	..	19	109
Taranaki North	1,531	..	30	30	24	460	..	..	..	65	2,140
Taranaki ..	557	..	10	..	..	265	..	..	..	148	980
Wellington Nth.	552	..	50	..	..	3	..	..	..	..	605
Wellington ..	50	..	..	45	..	73	..	..	..	86	254
Nelson and Marlborough	26	12	46	30	8	..	..	..	..	31	153
Westland ..	1,903	1,440	33	65	..	12	600	..	..	88	4,141
Canterbury ..	11,028	..	82	..	127	15	..	..	..	90	11,342
Canterbury Sth.	58	..	30	..	54	..	..	..	..	7	149
Otago ..	10,257	65	30	..	68	20	..	..	..	275	10,715
Southland ..	51	115	46	29	45	2	..	1,200	450	34	1,972
Totals ..	38,854	3,743	438	218	326	918	898	1,210	450	928	47,983

The following table gives details of the chief hydro-electric installations from which power is distributed for public supply. Of the twenty-four stations mentioned, seventeen are operated by local authorities, three by the State, and four by private companies.

Locality.	Supply Authority.	Power installed.		Max. Load, Kw., Year ending 31st March, 1920.	Distance transmitted: Miles.	Voltage of Transmission.
		H.P.	Kw.			
Canterbury* ..	P.W. Department	8,000	6,000	7,066†	65	66,000
Horahora ..	,,	8,400	6,300	2,700	55	50,000
Dunedin‡ ..	City Council ..	8,000	6,000	5,420	32	35,000
Rotorua ..	Tourist Department	380	200	184	13	6,600
Hawera§ ..	Electric Light Co...	600	445	362	12	5,500
Wairua Falls..	Wilsons (N.Z.) Cement Co.	3,300	2,000	1,460	22	22,000
Stratford§ ..	Borough Council ..	150	90	187	2	2,200
New Plymouth	,, ..	1,150	785	750	5	6,600
Inglewood ..	,, ..	200	120	60	3	3,200
Waverley ..	Town Board ..	60	40	30	2	2,300
Patea ..	Borough Council ..	70	50	50	4	3,000
Thames ..	,, ..	150	105	105	1	460
Te Aroha§ ..	,, ..	255	150	100	3	3,300
Ohakune ..	,, ..	160	120	45	1	2,400

* Lake Coleridge plant. † Overload. ‡ Waipori plant. § Deisel auxiliary.

Locality.	Supply Authority.	Power installed.		Max. Load, Kw., Year ending 31st March, 1920.	Distance transmitted: Miles.	Voltage of Transmission.
		H.P.	Kw.			
Raetihi ..	Town Board ..	80	60	45	4	3,300
Tauranga ..	Borough Council ..	213	160	150	18	11,000
Akaroa ..	,, ..	50	30	30	1	220
Taihape ..	,, ..	133	100	128	2	460
Mangaweka ..	Town Board ..	47	35	23	3	2,400
Brightwater*..	Waimea Electric Co.	53	40	42	4	2,300
Reefton† ..	Electric Supply Co.	80	60	80	1	230
Oamaru ..	Borough Council ..	150	112	75	..	3,300
Kaponga ..	Town Board ..	60	45	42	..	230
Gore ..	Borough Council ..	200	150	100	6	11,000

* Gas auxiliary. † Steam auxiliary.

STATE AID TO WATER-POWER.

LAKE COLERIDGE WORKS.

The Aid to Water-power Works Act of 1910 empowered the State to establish hydro-electric-supply installations, and the first is now in operation at Lake Coleridge, in the Southern Alps, sixty-five miles west of Christchurch. This plant has been designed for a total capacity of 12,000 kilowatts (16,000 h.p.), but natural features of the lake and adjacent rivers allow of a very large extension of the supply up to 58,000 h.p. The transmission-line is constructed in duplicate by separate routes to Christchurch, thus ensuring continuity of supply, each line having a capacity of 5,000 kw. The installed plant capacity is 12,000 h.p., and further plant of 4,000 h.p. capacity is now on order for extensions. The population being served is over 110,000, and a large demand for power is being made. Contracts have already been made for the bulk supply to the Christchurch City Council and some fifteen other local bodies for retail distribution, the Christchurch Tramway Board, and the power-supply to the large meat-freezing works and dairy factories, tanneries, flour-mills, woollen-mills, and other factories and industries of Canterbury. The contract entered into with the Christchurch City Council provides for a charge for the first 300 kilowatts (400 h.p.) of £8 13s. 4d. per annum per kilowatt of maximum load (equivalent to £6 10s. per horse-power), and all over 300 kilowatts at £5 per annum per kilowatt of maximum load (equivalent to £3 15s. per horse-power). This enables the Council to retail it to the public for lighting at 5d. per unit, flat rate, or 6d. per unit for forty hours of maximum demand and 1d. per unit thereafter, and at 1½d. per unit for power in small units, and special rates ranging from ½d. to ⅛d. per unit for special contracts. The standard rate of sale by the Public Works Department is based on £16 per kilowatt year (£12 per horse-power year).

The growth of the supply and the general financial results are as follows :—

Results of Operation for	First Year ending March, 1916.	Second Year ending March, 1917.	Third Year ending March, 1918.	Fourth Year ending March, 1919.	Fifth Year ending March, 1920.
Capital outlay	£320,330	£366,984	£389,754	£403,157	£422,076
Working costs	£9,383	£12,889	£14,449	£17,138	£17,760
Interest, 4 per cent. ..	£11,398	£13,713	£14,871	£15,692	£16,863
Depreciation, 2 per cent...	£5,386	£6,078	£7,013	£7,329	£7,623
Total costs	£26,167	£32,710	£36,333	£40,159	£42,246
Total revenue	£8,518	£20,754	£32,092	£37,324	£45,831
Maximum load, kw.—					
Power-house	1,372	4,366	5,438	5,900	7,066
Substation	1,220	3,900	4,800	5,340	6,260
Units output—					
Power-house	4,860,260	14,774,960	22,403,660	27,495,720	33,010,130
Substation	4,128,232	12,934,230	20,539,430	24,548,554	29,572,160
Total units sold ..	3,994,767	11,664,961	19,844,676	23,387,546	28,017,976
Average weekly load factor, per cent.—					
Power-house	41·3	52·9	58·0	59.1	59·9
Substation	43·3	53·1	58·4	58·4	58·6
Working cost per unit sold	0·56d.	0·265d.	0·175d.	0·176d.	0·15d.
Capital charge per unit sold	1·01d.	0·41d.	0·265d.	0·236d.	0·21d.
Total cost per unit sold ..	1·57d.	0·675d.	0·44d.	0·412d.	0·36d.
Revenue per unit sold ..	0·51d.	0·45d.	0·388d.	0·383d.	0·39d.
Total cost per kw. substation maximum	£21·4	£8·4	£7·57	£7·52	£6·75

To the above costs must be added the cost of retailing by the various local authorities, and the gross results of distribution in the district for the year ending 31st March, 1920, are given in the following table.

Gross Financial Results of the Distribution of Lake Coleridge Power in Canterbury, 31st March, 1920.

Distributing Authority.	Number of Consumers.	Capital Outlay.	Revenue from Consumers.	Paid for Electricity.	Maintenance and Working Expenses.	Interest.	Sinking Fund.	Depreciation.	Net Profit.
		£	£	£	£	£	£	£	£
Public Works Department	359	422,076	24,780*	..	17,759	16,863	..	7,624	3,585
Christchurch City Council	6,632	302,185	66,662*	16,029†	19,342	11,610	..	15,628	5,933
Halswell County Council	78	5,000	264	105†	50	120	50	..	61§
Heathcote County Council	432	9,700	2,310	1,029†	671	401	77	..	131
Kaiapoi Borough Council	326	4,320	1,792	722†	445	161	..	..	464
Lyttelton Borough Council	108	5,000	1,560	677†	390	214	100	..	179
Riccarton Borough Council	325	4,998	1,521	217† 309‡	354	237	..	240	164
Rangiora Borough Council	171	5,500	708	279†	174	289	55	..	80§
Rangiora County Council	121	6,659	639	189†	54	151	50	..	195
Spreydon Borough Council	363	6,162	1,230	370‡	277	300	60	125	98
Sumner Borough Council	292	6,465	1,565	495†	435	315	60	129	131
Tai Tapu Dairy Company	109	5,344	1,606	720†	423	318	194	..	49§
Waimairi County Council	1,289	37,650	5,659	83† 1,201‡	1,785	1,938	..	..	651
Woolston Borough Council	286	7,515	1,319	506†	395	343	70	..	5
Totals	10,831	828,574	111,615	22,931	42,554	33,260	716	23,746	11,337

* After deducting amount of sales to other distributing bodies. † Paid to Public Works Department. ‡ Paid to Christchurch City Council. § Net loss.

The column "Revenue from Consumers" omits, in the cases of the Public Works Department and Christchurch City Council, the revenue from the sale of energy to other local authorities for distribution, as this is resold and the actual revenue from the consumers is included in the revenue of the distributing local authority. The amounts thus paid for power in bulk for resale are shown in the column "Paid for Electricity."

Practically all the local authorities were carrying out construction during the year. As interest during construction is paid in all cases out of capital, the period on which the amount of interest included in the columns "Interest" and "Sinking Fund" is based does not in many cases cover the whole year.

Waikato Electric-power Supply.

In November, 1920, the Waihi Gold-mining Company's electric-power plant at Horahora was acquired by the State for £212,500.

The main features of the plant acquired are the headworks and generating-station on the Waikato River at Horahora, seventeen miles from Cambridge, with a plant capacity of six generators each capable of generating 1,050 kw. or a total of 6,300 kw.; the transmission-line of three No. O.S.W.G. copper conductors on steel towers from Horahora to Waikino (fifty-five miles); and the transformer-station at Waikino, for transforming the energy supplied to the Waihi Company's mine.

As shown in the accounts, the operations for the five months ending 31st March, 1920, resulted in a gross revenue of £5,803, or £3,933 in excess of working-expenses. Interest on the purchase-money amounted to £4,427, and depreciation at 2 per cent. per annum as required by law to £1,628, leaving a deficiency after paying working and capital charges of £2,122.

The total number of units generated over the five months was 6,415,150, and the number delivered to consumers was 5,630,200, so that 784,950 units, or 12·3 per cent. of the amount generated, were lost in transmission. The maximum demand on the power-house was 2,700 kilowatts.

The following shows the average cost of production:—

—	Costs.	Per Unit generated.	Per Unit sold.	Per Kilowatt of Power-house. Max. per Year.
	£	d.	d.	£
Generating	1,024	0·040	0·043	0·91
Transmission	278	0·010	0·012	0·23
Distribution	225	0·008	0·010	0·20
Management	343	0·013	0·015	0·30
Total working costs ..	1,870	0·071	0·080	1·64
Interest	4,427	0·165	0·189	3·93
Depreciation	1,628	0·061	0·069	1·45
Total costs	7,925	0·297	0·338	7·02

The revenue represented a return of 0·217d. per unit generated, 0·247d. per unit sold, and £5 16s. per annum per kilowatt of power-house maximum.

The total power installed at Horahora (6,300 kw., or 8,400 h.p.) will be dealt with as follows:—

	Horse-power.
Spare standby unit	1,400
For Waihi Gold-mining Company	3,300
For Arapuni construction-works	200
For special industries	500
For losses in transmission	600
Available for local authorities	2,400
	8,400

Allocation of Power available.

In allocating the power, the population and other considerations, such as existing installations, have been taken into account, and the following allocation is the result of a careful investigation into the whole of the factors:—

	Horse-power.
Thames Valley Power Board	900
Te Awamutu Power Board	600
Cambridge Power Board	200
Central Power Board	350
Hamilton Borough Council	300
Waihi Borough Council	50
	2,400

WAIPORI WATER-SUPPLY.

The only other hydro-electric development of any size is the power-station of the Dunedin City Council on the Waipori River, thirty-two miles from the city. This plant was started in 1907 with two units of 1,000 kilowatts (1,340 h.p.) each. Two more similar units were added in 1910, and two more were installed in 1913, which brings the total capacity up to 6,000 kilowatts (8,000 h.p.). The retail rates charged range from 5d. to 1d. per unit for lighting, and from 2d. to ½d. per unit for power purposes.

The output for the year 1919–20 was as follows:—

	Units sold. Number.	Average Price per Unit. d.
Private lighting	2,651,628	3·49
Public lighting	398,028	2·88
Power and heating	8,375,387	0·83
Tramways	2,777,744	0·70
Total supply	14,202,787	1·43

The total outlay to the 31st March, 1920, was £526,181, including distribution, standby plant, and public lighting; the total revenue for the year ended the 31st March, 1920, £84,720; and the total expenditure, including

interest, sinking fund, depreciation, and renewal funds, £74,892, leaving a net profit of £9,828. The number of consumers supplied was 8,313, and the total capacity of all connections to the mains at the 31st March, 1920, was 17,770 kilowatts.

OTHER WORKS.

A large and comprehensive scheme is now under construction for the supply of electrical energy in the North Island, with the object of making it generally available, as far as possible, to all the towns and districts throughout the Island. It is anticipated that the productiveness of the country will be greatly increased, the dairying industry in particular being capable of expansion with the provision of cheap electric power.

A complete scheme was outlined in a report dated October, 1918, by Mr. Evan Parry, B.Sc. M.I.C.E., recently Chief Electrical Engineer of the Public Works Department. He estimates the demand at 0·2 h.p. per head of population, exclusive of large blocks of power required for electro-chemical and metallurgical industries, and allowing for losses in transmission and distribution the power required on this basis for the North Island is 160,000 h.p. This it is proposed to obtain from three sources—the Mangahao River, near Shannon (24,000 h.p.), Lake Waikaremoana (40,000 h.p.), and the Arapuni Rapids, on the Waikato, near Putaruru (96,000 h.p.). Of these the Waikaremoana scheme is capable of further development up to a total of 130,000 h.p., and Arapuni to a total of 160,000 h.p.

Capital Expenditure.

The complete estimate to provide for the general scheme of electricity-supply, based on 12 per cent. in excess of pre-war costs, is as follows:—

	H.P.	Cost.	Per H.P.	Amount.	Per Horse-power.
Generating-stations (total plant capacity 160,000 h.p.)—				£	£
Mangahao ..	24,000	£438,654	18·30		
Waikaremoana ..	40,000	544,369	13·16		
Arapuni ..	96,000	1,078,700	10·80		
	160,000			2,061,723	12·88
Main transmission-lines				1,553,880	11·22
Extra branch transmission-lines at lower voltage to main substations not on main lines				241,360	
Main substations				838,808	5·24
Distribution-lines and secondary substations				2,086,000	13·04
				6,781,771	42·38
Interest during construction				271,271	1·69
Assistance to local authorities and power-users ..				100,000	0·62
Working capital				150,000	0·94
Total				7,303,042	45·63

The capital charges for interest, depreciation, and sinking fund at 7½ per cent. will amount to £547,728 per annum. The working-expenses should not exceed £220,000 per annum, making a total annual expenditure of £767,728, requiring an average return of £5·9 per horse-power per annum of maximum load—*i.e.*, about £8 per kilowatt.

Electric-power Boards.

The policy of the Government generally is to supply power in bulk, leaving the reticulation and retail supply in the hands of the local authorities. In the past the only local authorities available have been the cities, boroughs, counties, and Town Boards, but with the extension of electric supply into the country areas a stronger organization became necessary, and this has been provided under the Electric Power Boards Act of 1918. This Act provides for several local districts to combine for the purpose of electric-power distribution, and to set up a special Electric-power Board to carry out the work, with rating-powers over the district concerned.

Amendments to the original Act, based on the results of experience, have been passed in 1919 and 1920 respectively.

The provisions of this Act have now been taken advantage of by ten districts details of which are set out in the table herewith. The total area covered by these ten districts is 17,179 square miles, being 16·6 per cent. of the total area of the Dominion, and the total population included is 137,960, being 12·5 per cent. of the population of the Dominion. Five of the Boards have laid out their reticulation systems and submitted the necessary loans to the ratepayers for approval. Of these one (Southland) includes a generating-station at Lake Monowai, and the other four provide for taking power in bulk from the Public Works Department.

The total amount of the loans authorized by the ratepayers of these five districts amounts to £1,980,000. This is £20·6 per head of population concerned, and 7·25 per cent. of the unimproved rateable value.

Name of Electric-power District.	Proclamation constituting District Gazetted.	Number of Members on Board.	Approximate Area of District.	Population.	Value of Rateable Property (unimproved).	Amount of Loan.	Voting for Loan Poll.	
							For.	Ag'nt.
			Square Miles.		£	£		
Southland ..	19/11/19	12	9,986	65,450	13,600,471	1,500,000	6,516	415
Thames Valley ..	8/1/20	12	2,304	16,000	6,814,993	200,000	1,503	28
Te Awamutu ..	8/1/20	10	309	6,000	1,759,558	120,000	359	..
Cambridge ..	8/1/20	8	101	5,000	1,683,632	60,000	198	3
Banks Peninsula	8/1/20	7	372	3,500	3,430,817	100,000	331	23
Wairarapa ..	25/3/20	9	2,073	21,800	3,114,718	Poll not yet taken.		
Central ..	8/7/20	7	300	9,110	3,067,904	,,	,,	,,
Teviot ..	22/7/20	7	120	1,800	169,137	,,	,,	,,
Wairoa ..	29/7/20	10	1,369	2,900	2,417,251	,,	,,	,,
Springs-Ellesmere	8/7/20	7	242	5,400	2,627,468	,,	,,	,,
Totals ..	..	..	17,179	137,960	39,285,949	1,980,000	8,907	469

Undeveloped Power.

In addition to the developed power in New Zealand there is a practically unlimited amount of undeveloped power. The following table gives the particulars of the more important available water-powers, showing also the nearest market consisting of a city or an actual or potential port. A considerable number of these are suitable for general industrial development, but the largest ones, as a rule being in the unsettled portions of the South Island and near the deep-water sounds, are particularly suitable for utilization in connection with electro-chemical or electro-metallurgical industries.

North Island.

Source of Power.	Position of Power-house.	Available Flow: Cubic Feet per Second.	Available Head: Feet.	Average Power on 50 per cent. Load Factor.		Nearest City, Port, or Deep Water.	Distance: Miles.
				H.P.	KW.		
North Auckland District.							
Wairua Falls ..	Wairua Falls ..	300	130	3,200	2,400	Whangarei ..	16
South Auckland District.							
Kaituna ..	Okere Falls ..	500*	784	60,000†	45,000	Tauranga ..	25
						Auckland ..	125
Waikato River ..	Huka Falls ..	4,400*	50	20,000	15,000	,, ..	158
,, ..	Aratiatia Rapids ..	4,400*	170	136,000†	100,000	,, ..	154
,, ..	Orakeikorako Rapids	4,400*	35	14,000	10,000	,, ..	148
,, ..	Aniwhaniwha Falls	4,400*	80	32,000	24,000	,, ..	142
,, ..	Atiamuri Rapids ..	4,400*	25	10,000†	7,500	,, ..	139
,, ..	Arapuni Gorge ..	5,300	165	163,000†	120,000	,, ..	105
,, ..	Horahora Rapids ..	5,300	27	13,000	10,000	,, ..	97
Pokaiwhenua River	,, ..	165	170	4,600†	3,400	,, ..	97
Omanawa ..	Omanawa ..	160	108	1,500	1,100	Tauranga ..	16
Wairere Falls ..	Wairere Falls ..	160	60	860	600	Te Kuiti ..	18
Hawke's Bay District.							
Waikaremoana ..	Upper Waikaretaheki	530*	1,100	97,000†	75,000	Gisborne ..	50
,,	Lower Waikaretaheki	530*	360	32,000†	24,000	Napier ..	60
Te Reinga Falls ..	Te Reinga Falls ..	124	125	1,300	1,000	Gisborne ..	35
Waikohu River ..	Waikohu ..	45*	847	6,000†	4,500	,, ..	26
Wanganui District.							
Lake Rotoaira ..	Patu River ..	260	520	11,000	..	Wanganui ..	105
Mangawhero River	Raukawa Falls ..	125	90	940	..	,, ..	45
,,	Wanganui River ..	125	680	7,100	..	,, ..	24
Rangitikei River ..	Makohine ..	1,500	300	75,000†	..	,, ..	48
Wangaehu River ..	Wangachu River ..	260	70	1,500	..	,, ..	25
Taranaki District.							
Waitara River ..	Waitara River ..	400	140	4,600	.	New Plymouth	12
Waiwakaiho ..	Waiwakaiho ..	120	250	5,000†	..	,, ..	4
Wellington District.							
Mangahao River ..	Shannon ..	144*	895	24,000†	..	Wellington ..	65
Makuri River ..	Makuri Gorge ..	100	384	3,200	..	Pahiatua ..	20
Waiohine ..	Woodside ..	120	120	2,400†	..	Masterton ..	15
Hutt River ..	Mungaroa ..	200*	330	11,000†	..	Wellington ..	24

* Signifies seasonal storage made available. † Signifies storage available to utilize 50 per cent. daily load factor.

SOUTH ISLAND.

Source of Power.	Position of Power-house.	Available Flow: Cubic Feet per Second.	Available Head: Feet.	Average Power on 50 per cent. Load Factor		Nearest City, Port, or Deep Water.	Distance: Miles.
				H.P.	KW.		
Nelson District.							
Boulder Lake ..	Aorere River ..	50	2,600	11,000	8,000	Golden Bay ..	10
Rotoiti Lake ..	Gowan River ..	200	1,200	20,000	15,000	Westport ..	48
						Nelson ..	48
Rotoroa Lake ..	Buller River ..	900	400	30,000	22,000	Westport ..	48
						Nelson ..	48
Buller River ..	Lyell	..	..	25,000	18,000	Westport ..	24
Inangahua River ..	Blackwater River ..	780	125	8,000	6,000	,, ..	18
Westland District.							
Lake Brunner ..	Stillwater ..	1,750	200	29,000	22,000	Greymouth ..	10
Kumara Water-race	Kumara	87	330	2,400	1,800	,, ..	12
Otira River ..	Otira	40	700	2,300	1,700	,, ..	52
Rolleston River ..	,, ...	36	700	2,000	1,500	,, ..	52
Kanieri Lake ..	Kanieri River ..	100	330	2,800	2,100	Hokitika ..	20
Toaroha River ..	Toaroha River ..	150	760	9,500	7,100	,, ..	17
Whitcombe River	Hokitika River ..	250	800	16,000	12,000	,, ..	20
Kakapotahi River	Kakapotahi River ..	100	580	4,800	3,600	,, ..	26
Wanganui River ..	Hende's Ferry ..	830	580	40,000	30,000	,, ..	36
Wataroa River ..	Wataroa	1,360	700	80,000	60,000	,, ..	48
Canterbury District.							
Clarence River ..	Jollies Pass ..	200	1,160	20,000	15,000	Christchurch ..	82
,, ..	Conway River ..	1,150	1,050	100,000	75,000	,, ..	88
						Kaikoura ..	25
Waiau-ua River ..	Culverden' ..	1,600	200	27,000	20,000	Christchurch ..	75
Waimakariri River	Gorge Bridge ..	2,000	90	15,000	11,000	,, ..	30
Lake Coleridge ..	Rakaia River ..	100*	480	8,000†	6,000	,, ..	65
Acheron River ..	,, ..	50*	480	4,000†	3,000	,, ..	70
Harper River ..	,, ..	420*	480	32,000†	24,000	,, ..	70
Wilberforce River	,, ..	1,100	480	44,000	33,000	,, ..	70
Rakaia River ..	Gorge Bridge ..	2,600	30	6,500	4,800	,, ..	25
Lake Heron ..	Rakaia River ..	300	200	4,000	3,000	,, ..	88
Rangitata River ..	Arundel	1,100	250	23,000	17,000	Timaru ..	35
Opihi River ..	Opihi Gorge ..	200	400	6,700	5,000	,, ..	30
Opuha River ..	,, ..	200	400	6,700	5,000	Christchurch ..	100
Tekapo Lake ..	Fairlie	5,100	900	400,000	300,000	Timaru ..	40
Ohau Lake ..	Waitaki River ..	5,000	600	250,000	180,000	,, ..	52
Otago and Southland Districts.							
Ahuriri River ..	Waitaki River ..	600	200	10,000	7,500	Oamaru ..	62
						Timaru ..	100
Waipori Falls ..	Waipori River ..	135	650	7,300	5,500	Dunedin ..	29
Lee Stream ..	Outram	15	750	1,280	970	,, ..	18
Deep Stream ..	Taieri River ..	110	900	8,400	6,300	,, ..	20
Taieri River ..	Deep Stream ..	700	220	12,000	9,000	,, ..	44
Talla Burn ..	Clutha River ..	30	890	2,200	1,600	,, ..	60
Teviot River ..	Roxburgh ..	100*	1,900	30,000†	21,000	,, ..	90
Manwherika River	Chatto Creek ..	200	350	5,800	4,400	,, ..	127
Hawea Lake ..	Wanaka Lake ..	2,500*	205	80,000†	60,000	,, ..	170
Wakatipu Lake ..	Kawarau River ..	11,000	544	500,000	375,000	,, ..	140
Shotover ..	Wakatipu Lake ..	500	250	14,500	11,000	Invercargill ..	112
Lake Hall ..	Doubtful Sound ..	220	2,625	48,000	36,000	On seaboard ..	..
Lake Cecil ..	Lake Te Anau ..	200	900	15,000	11,200	,, ..	..
Lake Hilda ..	,, ..	1,550	1,190	55,000	41,080	,, ..	..
Lake Te Anau ..	George Sound ..	12,630	694	750,000	560,000	,, ..	..
Lake Manapouri ..	Smith Sound ..	8,400	600	120,000	315,000	,, ..	..
Lake Monowai ..	Waiau River ..	700*	180	20,000†	15,000	Invercargill ..	60
Lake Hauroto ..	Tewaewae Bay ..	2,300	514	100,000	75,000	,, ..	51

* Signifies seasonal storage made available. † Signifies storage available to utilize 50 per cent. daily load factor.

SECTION XXI.—MANUFACTORIES AND WORKS.

STATISTICS of industrial manufacture in the Dominion have been collected quinquennially (in conjunction with the population census) since 1867. For some years past the desirability of an annual collection has been recognized, but various circumstances have prevented its inception until 1918–19. On the 19th June, 1919, regulations under the Census and Statistics Act were gazetted prescribing the establishments in respect of which returns are required to be furnished annually, and also the form in which the information is to be supplied.

Under these regulations a "factory" is defined as an establishment engaged in manufacture, repair, or preparation of articles for wholesale or retail trade or for export which employs at least two hands or uses motive power, with the exception of the following, which are expressly excluded: Bakeries, butcheries, laundries, smithies, waterworks, shops engaged in retail trade only, and farmers or others using motive power for their own individual and private use. The following are, however, required to furnish returns even although employing less than two hands and not using motive power: Tanneries, bacon, butter, cheese, soap or candle factories, brickyards, and limeworks.

This definition is practically, in concrete form, the procedure formerly adopted in deciding whether an establishment is required to furnish a return or not, but in some respects a less rigid interpretation is made.

The definition is fairly comprehensive, and clearly includes such industries as, for instance, jewellery and watch repairing, boot, shoe, and saddlery repairing, and similar trades. In former years a number of small establishments thus engaged were included in the statistics, but it has now been decided to exclude such unless also engaged in actual manufacture employing at least two hands. This has had the effect of showing an apparent decrease in the number of establishments in some industries and also in the total of all industries; but in other respects the effect on the statistics is negligible, the number of employees, materials used, products, &c., thus excluded in the trades concerned being comparatively small.

It should be noted that these statistics do not cover and do not purport to cover all establishments registered as factories in the Dominion, for the following reasons: "One-man" businesses are excluded; some small repair shops (as explained previously) are excluded, even although they may employ two or more hands; and in some cases where a factory has two or more branches it has been found impracticable to obtain separate returns, and all the branches have been treated as one establishment.

In comparing previous years with the 1918–19 collection the foregoing remarks should be borne in mind, and also the fact that in some of the earlier years, owing to the longer intervals between collections, lax methods of book-keeping more widely prevailing, less understanding of the requirements of the Statistical Office, and less appreciation of the necessity for and value of the statistics compiled, no doubt to a certain extent impaired the accuracy of the published results.

Number of Establishments.

As previously stated, the omission of small repair-shops from the 1918–19 collection has resulted in an apparent decrease in the number of establishments as compared with 1916, the numbers being 4,245 and 4,670 respectively. The industries principally affected by the omissions referred to are—boot and shoe making, saddlery and harness making, coachbuilding, and tinned-plate and sheet-metal working.

The numbers and per-cent. increases or decreases in the principal industries since 1901 are as follows:—

Industry.	1900–1 Number.	1905–6		1910–11.		1915–16.		1918–19.	
		Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.
Meat freezing and preserving	34	37	+ 8·8	41	+10·8	45	+ 9·8	48	+ 6·7
Butter, cheese, and condensed-milk manufacturing	248	266	+ 7·3	340	+27·8	352	+ 3·5	405	+15·1
Sawmilling and sash and door making	334	444	+32·9	534	+20·3	292	45·3	301	+ 3·1
Engineering	37	61	+64·9	120	+96·7	142	+18·3	132	— 7·0
Printing, publishing, and bookbinding	188	239	+27·1	241	+ 0·8	266	+10·4	259	— 2·6
Coachbuilding.. ..	160	183	+14·4	180	—1·6	313	+73·9	129	*
Tanning, fellmongering, and wool-scouring	119	99	—16·8	79	—20·2	59	—25·3	65	+10·2
Furniture and cabinet making	144	172	+19·4	207	+20·3	257	+24·2	219	—14·8
Woollen-milling ..	10	10	+ 0·0	10	+ 0·0	10	+ 0·0	10	0·0
Tailoring	175	308	+76·0	448	+45·5	496	+10·7	335	—32·5
Dress and millinery making	290	338	+16·6	382	+13·0	339	—11·3	341	+ 0·6
Boot and shoe making ..	126	72	*	74	*	166	*	75	*
Clothing-manufacture ..	21	23	+ 9·5	69	+200·0	83	+20·3	156	+88·0
Flax-milling	101	240	+137·6	81	—70·4	76	— 6·2	77	+ 1·3

* Comparison invalidated owing to inclusion in some years of small repair-shops.

Employees.

Previous to 1918–19 productive employees only were asked for; employees are now, however, required under three heads—viz., administative, productive, and distributive. In the light of information now available it is obvious that on previous occasions employers other than those directly productive were often included, so that no strictly comparable figures are available.

Employees returned in 1915–16 numbered 57,823, while productive employees were returned in 1918–19 as 58,788, an increase of 965, or 1·5 per cent. The increase is in reality greater, for the reason stated.

Total employees, 1918–19, were classified as follows (all and principal industries):—

EMPLOYEES IN MANUFACTORIES, 1918–19.

Industry.	Administrative.				Productive.				Distributive.				Total.		
	Male.	Female.	Male and Female.	Per Cent. of Total.	Male.	Female.	Male and Female.	Per Cent. of Total.	Male.	Female.	Male and Female.	Per Cent. of Total.	Male.	Female.	Male and Female.
All industries	1,761	329	2,090	3·1	44,128	14,660	58,788	87·9	5,351	681	6,032	9·0	51,240	15,670	66,910
Principal Industries.															
Meat freezing and preserving ..	165	32	197	2·4	7,782	78	7,860	96·7	50	23	73	0·9	7,997	133	8,130
Butter, cheese, and condensed-milk manufacture	239	10	249	8·7	2,346	89	2,435	85·2	139	36	175	6·1	2,724	135	2,859
Sawmilling, sash and door making	101	10	111	1·9	5,153	29	5,182	89·0	506	22	528	9·1	5,760	61	5,821
Engineering..	91	20	111	4·1	2,449	40	2,489	91·1	101	30	131	4·8	2,641	90	2,731
Printing, publishing, and book-binding	170	50	220	4·9	2,619	862	3,481	78·3	659	87	746	16·8	3,448	999	4,447
Coachbuilding	11	5	16	1·9	789	21	810	97·2	4	3	7	0·9	804	29	833
Tanning, fellmongering, and wool-scouring	25	3	28	2·0	1,313	15	1,328	94·7	39	8	47	3·3	1,377	26	1,403
Furniture and cabinet making..	32	9	41	2·6	1,394	91	1,485	93·7	37	22	59	3·7	1,463	122	1,585
Woollen-milling.	8	2	10	0·5	779	1,083	1,862	98·7	11	4	15	0·8	798	1,089	1,887
Tailoring	14	1	15	0·6	819	1,760	2,579	96·3	67	16	83	3·1	900	1,777	2,677
Dress and millinery making ..	2	2	4	0·1	44	3,157	3,201	99·3	4	15	19	0·6	50	3,174	3,224
Boot and shoe making ..	24	4	28	1·2	1,474	830	2,304	94·9	64	31	95	3·9	1,562	865	2,427
Clothing-manufacture ..	13	16	29	0·6	597	3,906	4,503	96·6	48	82	130	2·8	658	4,004	4,662
Flax-milling	24	..	24	1·7	1,397	2	1,399	97·8	7	..	7	0·5	1,428	2	1,430

The most nearly comparable figures of employees (those returned as productive) are given for the last five censuses, together with the increase or decrease per cent. for all and for the principal industries.

Industry.	1900–1.	1905–6.		1910–11.		1915–16.		1918–19.	
	Number.	Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.	Number.	Increase or Decrease per Cent.
All industries	46,847	56,359	..	56,234	..	57,823	..	58,788	..
Deduct figures for industries included in some years and not in others	..	..	..	1,858	..	2,381	..	3,037	..
Comparative figures for industries common to all years	46,847	56,359	+20·3	54,376	−3·5	55,442	+2·0	55,751	+0·6
Principal Industries.									
Meat freezing and preserving	2,282	3,260	+42·9	4,095	+25·6	5,982	+46·1	7,860	+31·4
Butter, cheese, and condensed-milk manufacture	1,188	1,484	+24·9	1,504	+ 1·3	1,814	+20·6	2,435	+34·2
Sawmilling, sash and door making	6,812	9,111	+33·7	6,877	−24·5	5,870	−14·6	5,182	−11·7
Engineering	1,442	3,706	..	3,747	+ 1·1	2,783	−25·7	2,489	−10·6
Printing, publishing, and bookbinding	3,134	3,898	+24·3	4,222	+ 8·4	4,202	− 0·5	3,481	−17·2
Coachbuilding	1,185	1,465	+23·6	1,439	− 1·8	1,393	− 3·2	810	−41·9
Tanning, fellmongering, and wool-scouring	1,963	1,336	−31·9	1,372	+ 2·7	1,187	−13·5	1,328	+11·9
Furniture and cabinet making	1,310	1,528	+16·6	1,689	+10·5	1,821	+ 7·8	1,485	−18·4
Woollen-milling	1,693	1,549	− 8·6	1,410	− 9·0	1,897	+34·5	1,862	− 1·8
Tailoring	1,621	2,997	+84·9	4,225	+40·9	3,132	−25·9	2,579	−17·7
Dress and millinery making	2,888	3,039	+ 5·2	4,128	+35·8	3,645	−11·7	3,201	−12·2
Boot and shoe making	2,696	2,206	−18·2	2,072	− 6·1	2,257	+ 8·9	2,304	+ 2·1
Clothing-manufacture	2,512	1,914	−23·9	2,947	+53·9	3,574	+21·3	4,503	+26·0
Flax-milling	1,698	4,076	+140·0	1,244	−69·5	1,257	+ 1·0	1,399	+11·3

The average number of employees per establishment during the same period is shown below. It should be borne in mind that the rejection of schedules from small establishments engaged in retail repairs only has decreased the number of establishments in 1918–19, and consequently is responsible for a portion of the considerable increase in the number of employees per establishment. All administrative and distributive employees are also included in 1918–19.

Industry.	1900–1.	1905–6.	1910–11.	1915–16.	1918–19.
All industries	12·7	13·5	12·8	12·4	15·7
Principal Industries.					
Meat freezing and preserving	67·1	88·1	99·9	132·9	168·8
Butter, cheese, and condensed-milk manufacture	4·9	5·8	4·6	5·4	7·1
Sawmilling and sash and door making	20·4	20·5	12·9	20·1	19·3
Engineering	38·5	30·3	20·4	16·9	20·7
Printing, publishing, and bookbinding	16·6	16·3	17·5	15·8	17·2
Coachbuilding	7·4	8·0	7·9	4·4	6·5
Tanning, fellmongering, and wool-scouring	16·5	13·5	17·3	20·1	21·6
Furniture and cabinet making	9·1	8·9	8·1	7·1	7·2
Woollen-milling	169·3	154·9	141·0	189·7	188·7
Tailoring	9·3	9·7	9·4	6·3	8·0
Dress and millinery making	9·9	9·0	10·8	10·8	9·5
Clothing-manufacture	119·6	83·2	42·7	43·1	29·9
Flax-milling	16·8	16·9	15·4	16·5	18·6

Salaries and Wages paid.

Both the total amount paid in wages (nominal) to productive workers and also the average wage per worker show large increases from one census to another, particularly since 1905–6. No distinction is made as regards ages of workers, so that the subjoined figures include adults and young persons of each sex.

	Males.		Females.		Males and Females.	
	Total.	Average.	Total.	Average.	Total.	Average.
	£	£	£	£	£	£
All industries, 1900–1	2,972,193	81·9	330,454	31·3	3,302,647	70·5
,, 1905–6	3,979,593	88·5	478,026	41·9	4,457,619	79·1
,, 1910–11	4,865,426	115·1	706,844	50·6	5,591,270	99·4
,, 1915–16	5,868,788	133·5	785,716	56·7	6,654,504	117·1
,, 1918–19	7,033,491	159·4	1,009,216	68·8	8,042,707	136·8
Principal Industries, 1918–19.						
Meat freezing and preserving	1,271,241	159·0	13,102	98·5	1,284,343	158·0
Butter, cheese, and condensed-milk manufacture	422,564	155·1	9,864	73·1	432,428	151·3
Sawmilling and sash and door making	1,057,404	183·6	5,581	91·5	1,062,985	182·6
Engineering	369,734	151·0	2,698	67·5	372,432	149·6

	Males.		Females.		Males and Females.	
	Total.	Average.	Total	Average.	Total.	Average.
	£	£	£	£	£	£
Printing, publishing, and bookbinding	480,144	183·3	66,344	76·9	546,488	157·0
Coachbuilding	114,833	145·5	1,402	66·8	116,235	143·5
Tanning, fellmongering, and wool-scouring	211,856	161·3	1,726	115·0	213,582	160·8
Furniture and cabinet making	205,522	147·4	6,957	76·5	212,479	143·1
Woollen-milling	131,572	168·9	93,416	86·3	224,988	120·8
Tailoring	138,538	169·2	133,108	75·7	271,646	105·3
Dress and millinery making ..	7,867	178·8	187,099	59·3	194,966	60·9
Boot and shoe making ..	233,699	158·5	63,285	76·2	296,984	128·9
Clothing-manufacture ..	89,989	150·7	260,437	66·7	350,426	77·8
Flax-milling	226,331	161·9	256	128·0	226,587	160·7

In 1918–19 total salaries and wages paid on account of administration, production, and distribution were returned as shown in the next table. Percentages of total salaries and wages are given in each case for purposes of comparison (all and principal industries).

	Administrative.		Productive.		Distributive.	
	Amount.	Per Cent. of Total.	Amount.	Per Cent. of Total.	Amount.	Per Cent. of Total.
	£		£		£	
All industries	483,074	5·1	8,042,707	84·9	950,162	10·0
Principal Industries.						
Meat freezing and preserving ..	52,354	4·1	1,218,548	94·9	13,441	1·0
Butter, cheese, and condensed-milk manufacture	34,168	7·9	374,671	86·7	23,589	5·4
Sawmilling, sash and door making ..	29,018	2·7	944,683	88·9	89,284	8·4
Engineering	27,366	6·5	372,432	88·1	22,939	5·4
Printing, publishing, and bookbinding	58,316	8·5	546,488	79·6	81,969	11·9
Coachbuilding	2,389	2·0	116,235	97·1	1,088	0·9
Tanning, fellmongering, and wool-scouring	6,914	3·0	213,582	93·2	8,798	3·8
Furniture and cabinetmaking ..	10,107	4·3	212,479	91·8	8,979	3·9
Woollen-milling	4,393	1·9	224,988	96·5	3,789	1·6
Tailoring	4,302	1·5	271,646	95·0	9,919	3·5
Dress and millinery making ..	1,111	0·6	194,966	98·5	1,911	0·9
Boot and shoe making	5,763	1·8	296,984	92·3	19,091	5·9
Clothing-manufacture	3,622	0·9	350,426	95·6	12,934	3·5
Flax-milling	6,492	2·8	226,587	96·8	995	0·4

Motive Power.

The total horse-power in use in 1918–19 was 158,996, an increase of 12,955 since 1915–16. The average horse-power per establishment was 37·38, and per employee 2·70—increases of 6·11 and 0·17 respectively. Comparative figures for the last five collections are given in the following table.

	1900–1.	1905–06.	1910–11.	1915–16.	1918–19.
All Industries.					
Total horse-power..	39,113	60,335	100,587	146,041	158,996
Deduct figures for industries included in some years and not in others	..	..	127	403	477
Comparative figures for industries common to all years	39,113	60,335	100,460	145,638	158,519
Average per establishment	10·7	14·4	22·9	31·27	37·38
Average per productive employee. ..	0·8	1·7	1·8	2·53	2·70
Principal Industries (Total Horse-power).					
Meat freezing and preserving ..	7,057	9,498	16,531	28,767	36,555
Butter, cheese, and condensed-milk manufacture	2,399	3,759	5,995	12,890	13,762
Sawmilling, sash and door making ..	8,744	13,278	19,484	16,816	18,608
Engineering	541	1,109	3,333	3,322	4,408
Printing, publishing, and bookbinding	956	1,520	3,370	4,240	4,475
Coachbuilding	128	395	657	1,018	648
Tanning, fellmongering, and wool-scouring	1,108	980	1,927	1,890	2,963
Furniture and cabinetmaking ..	369	706	1,339	1,853	2,010
Woollen-milling	1,554	1,945	2,641	3,080	3,452
Boot and shoe making	184	328	680	831	1,197
Clothing-manufacture	67	135	576	488	613
Flax-milling	1,190	3,087	2,516	3,316	3,827

As regards kind of power used, the most remarkable development is the large increase in electric motors. Where electric current is available new installations of power are almost invariably of this type, and with increasing facilities no doubt will become correspondingly preponderant. The subjoined table shows the number of engines or motors of each kind in use at the last five censuses, together with the percentage each represents of the total number of engines or motors in the respective years.

Kind of Power.	1900–1.		1905–6.		1910–11.		1915–16.		1918–19.	
	No. of Engines or Motors.	Per Cent. of Total.	No. of Engines or Motors.	Per Cent. of Total.	No. of Engines or Motors.	Per Cent. of Total.	No. of Engines or Motors.	Per Cent. of Total.	No. of Engines or Motors.	Per Cent. of Total.
Steam ..	1,359	64·7	1,372	59·9	2,218	47·4	2,231	36·9	1,940	27·8
Coal-gas ..	407	19·4	452	19·7	853	18·2	809	13·4	539	7·7
Suction-gas ..									193	2·8
Oil ..	31	1·5	97	4·2	231	4·9	239	4·0	215	3·2
Electric ..	15	0·7	55	2·4	1,084	23·2	2,516	41·6	3,855	55·4
Water ..	216	10·3	197	8·6	229	4·9	236	3·9	217	3·1
Others and unspecified	73	3·4	120	5·2	65	1·4	10	0·2	..	..
Totals ..	2,101	100·0	2,293	100·0	4,680	100·0	6,041	100·0	6,959	100·0

A comparison is now given between 1915–16 and 1918–19, showing the numbers of engines and motors of each kind in use in each provincial district and in the principal industries:—

	Steam.		Gas.		Oil.		Electric.		Water.		Other and Unspecified.		Total.	
	1915–16.	1918–19.	1915–16.	1918–19.	1915–16.	1918–19.	1915–16.	1918–19.	1915–16.	1918–19.	1915–16.	1918–19.	1915–16.	1918–19.
Provincial districts—														
Auckland	553	496	243	223	80	55	712	1,051	37	37	2	..	1,627	1,862
Taranaki	339	181	17	20	18	13	99	144	86	61	..	..	559	419
Hawke's Bay	126	95	54	59	16	25	76	125	3	3	4	..	279	307
Wellington	355	411	222	213	41	47	589	806	11	16	1	..	1,219	1,493
Marlborough	31	26	8	9	3	2	14	2	1	1	..	..	57	40
Nelson	93	76	31	36	12	7	35	48	9	12	..	..	180	179
Westland	112	124	18	22	1	1	3	1	8	6	..	..	142	154
Canterbury	229	178	123	70	27	25	471	946	22	23	..	..	872	1,242
Otago	206	168	59	50	21	25	444	651	52	40	3	..	785	934
Southland	187	185	34	30	20	15	73	81	7	18	..	..	321	329
Dominion (all industries)	2,231	1,940	809	732	239	215	2,516	3,855	236	217	10	..	6,041	6,959
Principal Industries.														
Meat freezing and preserving	348	249	46	68	10	6	525	868	34	13	..	..	963	1,204
Butter, cheese, and condensed-milk manufacture ..	583	581	26	17	13	6	33	75	34	40	3	..	692	719
Sawmilling, sash and door making	502	521	3	17	7	4	13	68	..	5	..	..	525	615
Engineering	43	40	71	44	13	7	125	202	12	14	..	..	264	307
Printing, publishing, and bookbinding	7	8	153	125	27	31	428	470	24	22	1	..	640	656
Coachbuilding	10	2	40	29	40	23	63	59	5	1	..	..	158	114
Tanning, fellmongering, and wool-scouring	53	50	8	11	6	6	49	151	2	..	..	..	118	218
Furniture and cabinet making	28	12	87	64	..	9	88	132	4	7	..	..	207	224
Woollen-milling	16	16	5	5	..	..	14	15	1	1	..	..	36	37
Boot and shoe making	5	..	25	18	..	1	70	102	1	..	..	..	101	121
Clothing-manufacture	3	..	14	4	..	..	91	185	1	1	..	..	109	192
Flax-milling	72	42	24	3	5	..	2	126	11	3	..	..	114	174

MATERIALS USED OR OPERATED UPON.

The value of materials used or operated upon does not afford a very satisfactory basis of comparison as between one industry and another, for the reason that the change made during the process of manufacture varies very considerably. For instance, materials used or operated upon in the tanning, fellmongering, and wool-scouring industry were in 1918-19 valued at £3,119,665, while those used in printing, publishing, and bookbinding were valued at £785,171 only; on the basis of materials, then, it would appear that fellmongering, &c., had about four times the importance of printing, &c., but when the question of added value is considered it is found that the latter is more than two and a half times the importance of the former.

This added value is dealt with later in this section. The appended table gives the value of materials used in all and the principal industries as ascertained at the last five collections.

COST OF MATERIALS USED OR OPERATED UPON.

—	1900–1.	1905–6.	1910–11.	1915–16.	1918–19.
	£	£	£	£	£
All industries	6,997,480	13,163,692	20,810,211	31,317,969	40,429,784
Deduct figures for industries included in some years and not in others	..	..	170,270	435,331	1,024,880
Comparative figures for industries common to all years	6,997,480	13,163,692	20,639,941	30,882,638	39,404,904
Principal Industries.					
Meat freezing and preserving	*	3,672,002	6,533,363	10,554,905	12,546,448
Butter, cheese, and condensed-milk manufacture	1,195,600	2,062,215	3,304,993	6,263,971	8,107,693
Sawmilling and sash and door making	*	206,644	1,253,153	996,484	1,054,180
Engineering	186,208	223,365	315,371	361,480	407,852
Printing, publishing, and bookbinding	200,243	272,857	314,763	432,712	785,171
Coachbuilding	88,229	122,384	156,829	186,249	128,595
Tanning, fellmongering, and wool-scouring	1,391,323	1,201,318	1,788,772	2,215,417	3,119,665
Furniture and cabinet making	101,595	157,484	215,031	253,054	322,479
Woollen-milling	196,081	206,847	248,187	411,632	564,075
Tailoring	122,853	244,191	364,389	333,446	426,043
Dress and millinery making	173,211	181,201	285,573	267,855	330,383
Boot and shoe making	273,325	269,664	334,880	441,292	718,316
Clothing-manufacture	241,854	215,834	297,913	560,380	968,096
Flax-milling	53,064	185,894	73,835	174,573	217,281

* Information not available.

PRODUCTS.

The following table gives values of products of all and principal industries at each enumeration since 1900-1, together with the percentage increase during each period :-

Industry.	1900-1.	1905-6.		1910-11.		1915-16.		1918-19.	
	Value of Products.	Value of Products.	Increase per Cent.	Value of Products.	Increase per Cent.	Value of Products.	Increase per Cent.	Value of Products.	Increase per Cent.
	£	£		£		£		£	
All industries	12,863,969	23,371,177	..	31,729,002	..	45,454,184	..	58,374,507	..
Deduct figures for industries included in some years and not in others	..	..	..	667,337	..	908,236	..	1,695,799	..
Comparative figures for industries common to all years	12,863,969	23,371,177	81·7	31,061,665	32·9	44,545,948	43·4	56,678,708	27·2
Principal Industries.									
Meat freezing and preserving	3,834,891	4,928,545	28·5	7,422,187	50·6	12,613,571	69·4	14,852,732	17·8
Butter, cheese, and condensed-milk manufacture	1,535,150	2,581,639	68·5	3,919,184	51·8	7,670,752	95·7	10,056,782	31·1
Sawmilling and sash and door making	1,268,689	2,128,766	67·9	2,699,888	26·8	1,898,526	−29·0*	2,329,535	22·7
Engineering	361,958	437,036	20·7	751,485	76·5	883,496	17·6	1,123,300	27·1
Printing, publishing, and bookbinding	704,285	1,067,827	51·6	1,377,926	29·0	1,697,381	23·2	2,159,217	27·2
Coachbuilding	216,077	294,818	36·4	396,012	34·3	487,824	23·2	308,121	−36·7*
Tanning, fellmongering, and wool-scouring	1,888,107	1,836,310	−1·7*	2,036,770	10·9	2,755,283	35·3	3,662,659	32·9
Furniture and cabinet making	241,024	328,185	36·2	497,681	51·6	578,560	16·3	692,993	19·8
Woollen-milling	359,382	397,348	10·2	377,713	−4·9*	717,638	89·9	956,434	33·3
Tailoring	301,356	578,416	91·9	936,237	61·9	828,840	11·4*	914,170	10·3
Dress and millinery making	312,436	331,268	6·0	575,059	73·6	568,472	−1·1*	652,170	14·7
Boot and shoe making	529,254	501,065	−5·3*	619,873	23·7	801,572	29·3	1,199,897	49·7
Clothing-manufacture	446,173	423,144	−5·2*	507,125	19·8	908,117	79·7	1,498,132	65·0
Flax-milling	203,492	557,808	174·1	284,399	−49·0*	470,774	65·5	681,369	44·7

* Decrease.

For comparative purposes value of output per productive employee is frequently calculated and given over a period of years, but owing to increased prices of commodities it would appear that such a procedure would show to a considerable extent a fictitious increase in the productivity of labour. It has been thought advisable, therefore, to substitute for the unit "productive employee" an arbitrary unit "£100 expended in productive wages." The results of this are now given from 1900–1 to 1918–19.

VALUE OF OUTPUT PER £100 EXPENDED IN PRODUCTIVE WAGES.

—	1900–1.	1905–6.	1910–11.	1915–16.	1918–19.
	£	£	£	£	£
All industries	541	526	569	683	726
Principal Industries.					
Meat freezing and preserving	1,813	1,128	1,280	1,637	1,219
Butter, cheese, and condensed-milk manufacture	1,592	1,969	2,305	2,939	2,684
Sawmilling and sash and door making ..	247	255	349	204	247
Engineering	283	260	289	281	302
Printing, publishing, and bookbinding ..	247	266	281	287	395
Coachbuilding	259	254	264	297	265
Tanning, fellmongering, and wool-scouring	1,185	1,791	1,481	1,880	1,715
Furniture and cabinet making	264	246	279	212	326
Woollen-milling	321	378	275	382	425
Tailoring	293	269	273	282	337
Dress and millinery making	398	292	308	277	335
Boot and shoe making	275	292	313	336	404
Clothing-manufacture	326	293	299	384	428
Flax-milling	201	722	512	608	301

VALUE ADDED TO MATERIALS BY PROCESS OF MANUFACTURE OR TREATMENT.

The most satisfactory basis for comparison between one industry and another is the surplus of value of the finished product over the cost of materials used or treated. This surplus or added value represents the fund from which are derived wages, cost of power, overhead and other expenses, and profits.

These figures are, however, subject to the same disability as regards historical comparisons as are any other monetary expressions—viz., they are subject to distortion owing to fluctuations in price.

VALUE ADDED TO MATERIALS BY MANUFACTURE.

	1900-1.	1905-6.		1910-11.		1915-16.		1918-19.	
	Added Value.	Added Value	Increase per Cent.	Added Value.	Increase per Cent.	Added Value.	Increase per Cent.	Added Value.	Increase per Cent.
	£	£		£		£		£	
All industries	8,834,674	10,207,485	..	10,918,791	..	14,136,215	..	17,944,723	..
Deduct figures for industries included in some years and not in others	..	..	..	497,067	..	472,905	..	670,919	..
Comparative figures for industries common to all years	8,834,674	10,207,485	15·50	10,421,724	2·10	13,663,310	31·10	17,273,804	26·40
Principal Industries.									
Meat freezing and preserving	*	1,219,320	..	771,313	—36·70†	2,058,666	166·90	2,306,284	12·00
Butter, cheese, and condensed-milk manufacture	339,550	519,424	52·90	614,191	18·20	1,406,781	129·00	1,949,089	38·50
Sawmilling and sash and door making	*	1,922,122	..	1,446,735	—24·74†	902,042	—37·65†	1,275,355	41·32
Engineering	175,750	213,671	21·58	436,114	104·11	522,016	19·70	715,448	37·05
Printing, publishing, and bookbinding	504,042	794,970	57·72	1,063,163	33·74	1,265,119	19·00	1,374,046	8·60
Coachbuilding	127,848	172,434	34·87	239,183	38·71	301,575	26·09	179,526	—40·47†
Tanning, fellmongering, and wool-scouring	496,784	634,992	27·82	247,998	—60·94†	539,866	117·69	542,994	0·58
Furniture and cabinet making	139,429	170,701	22·43	282,650	65·58	325,506	15·16	370,514	13·83
Woollen-milling	163,301	190,501	16·66	129,526	—32·01†	306,006	136·25	392,359	28·22
Tailoring	178,503	334,225	87·24	571,848	71·09	495,394	13·37	488,127	1·47
Dress and millinery making	139,225	150,067	7·79	289,486	92·90	300,617	3·85	321,787	7·04
Boot and shoe making	255,929	231,401	—9·58†	284,993	23·16	360,280	26·42	481,581	33·67
Clothing-manufacture	204,319	207,310	1·46	209,212	0·92	347,737	66·21	530,036	52·42
Flax-milling	168,644	189,356	12·28	156,237	—17·49†	185,120	18·49	474,164	156·14

* Not available. † Decrease.

Fixed (Real) Assets.

In connection with the following table it should be understood that the figures given are of necessity only approximate, the principal reason for this being that where one building houses two or more factories carrying on different industries an apportionment has to be made between the industries, and this cannot be done with absolute accuracy. Furthermore, in many instances fixed assets are stated at their book value, and this may be an understatement owing to appreciated site-value or an overstatement owing to insufficient allowance being made for depreciation, obsolescence, &c. Where premises occupied are rented or leased (particularly if only a portion) it has been found impossible to arrive at the correct value; in the latter case it must obviously be so. In such circumstances the practice has been to ascertain the annual rental value and capitalize this.

Approximate Value of Land, Buildings, Machinery, and Plant, 1900–1 to 1918–19.

	1900–1.	1905–6.	1910–11.	1915–16.	1918–19.
	£	£	£	£	£
All industries	7,959,631	11,814,013	14,430,355	21,951,576	29,559,817
Principal Industries.					
Meat freezing and preserving	893,720	1,476,782	1,741,170	2,631,142	4,615,191
Butter, cheese, and condensed-milk manufacture	388,750	616,266	954,122	1,225,608	1,597,615
Sawmilling and sash and door making	703,620	1,204,843	1,806,628	2,329,454	1,954,681
Engineering	155,081	249,901	..	..	786,966
Printing, publishing, and bookbinding	559,538	920,022	1,302,497	1,601,078	1,627,849
Coachbuilding	150,811	251,717	320,974	371,358	268,610
Tanning, fellmongering, and wool-scouring	235,952	182,682	261,456	470,549	379,198
Furniture and cabinet making	170,338	239,375	327,682	403,853	405,899
Woollen-milling	277,422	307,759	289,089	427,984	456,551
Tailoring	211,016	372,026	483,719	564,744	679,901
Dress and millinery making	193,998	269,000	359,819	363,060	421,151
Boot and shoe making	176,992	153,991	227,057	295,024	313,350
Clothing-manufacture	97,092	90,641	194,481	218,917	441,987
Flax-milling	64,446	355,840	342,638	442,164	814,305

Geographical Distribution of Industries.

Appended is a table showing the number of all and principal industries in each provincial district in 1918-19:—

	Auckland.	Taranaki.	H'wke's Bay.	Wellington.	Marlborough	Nelson.	Westland.	Canterbury.	Otago.	Southland.	Dominion.
All industries	1,100	224	216	917	38	126	91	673	592	277	4,254
Principal Industries.											
Meat freezing and preserving	8	3	6	10	1	1	..	7	7	5	48
Butter, cheese, and condensed-milk manufacture	65	83	25	83	7	14	9	30	37	52	405
Sawmilling and sash and door making	92	9	15	67	4	23	28	21	14	28	301
Engineering	34	5	7	33	1	4	4	17	21	6	132
Printing, publishing, and bookbinding	75	13	12	57	2	6	4	37	36	17	259
Coachbuilding	42	8	8	27	..	7	1	19	9	8	129
Tanning, fellmongering, and wool-scouring	11	1	10	12	1	1	..	15	9	5	65
Furniture and cabinet making	71	11	10	58	1	6	6	29	19	8	219
Woollen-milling	1	..	1	1	..	..	..	3	4	..	10
Tailoring	96	19	17	55	4	8	6	55	52	23	335
Dress and millinery making	72	9	10	66	1	8	5	72	73	25	341
Boot and shoe making	35	1	..	15	..	1	..	13	8	2	75
Clothing-manufacture	45	2	1	45	..	..	..	33	26	4	156
Flax-milling	17	1	1	20	3	4	2	3	8	18	77

AGES OF INDUSTRIES.

A table is now given showing for all industries, and individually for the principal industries, the number established during the periods indicated :—

—	Prior to 1860.	1860–69.	1870–79.	1880–89.	1890–99.	1900–4.	1905–9.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	Not stated.	Total
All industries	59	186	277	436	536	438	586	172	146	177	184	188	137	155	169	184	224	4254
Principal Industries.																		
Meat freezing and preserving	1	2	1	15	4	4	2	4	1	..	..	2	5	4	1	1	1	48
Butter, cheese, and condensed-milk manufacture	..	..	3	18	72	51	46	20	24	23	21	15	23	16	13	6	54	405
Sawmilling and sash and door making	1	6	19	24	30	35	45	9	9	18	16	13	10	13	19	30	4	301
Engineering	2	11	13	8	9	13	17	7	9	12	8	6	4	2	..	4	7	132
Printing, publishing, and bookbinding	7	28	42	37	40	21	30	5	6	9	11	10	2	4	5	1	1	259
Coachbuilding	4	7	12	20	19	10	19	8	7	4	4	1	3	2	1	3	5	129
Tanning, fellmongering, and wool-scouring	..	4	7	14	10	6	5	4	..	1	..	4	5	..	..	1	4	65
Furniture and cabinet making	2	8	10	20	29	18	33	10	10	7	10	14	6	12	12	13	5	219
Woollen-milling	..	..	3	4	1	1	..	..	..	..	..	..	..	..	..	..	1	10
Tailoring	4	12	12	28	47	54	49	14	18	16	11	24	8	13	9	9	7	335
Dress and millinery making	3	9	12	32	28	19	47	17	15	14	23	20	12	19	24	28	19	341
Boot and shoe making	..	2	7	14	7	11	11	..	1	2	3	3	3	3	..	7	1	75
Clothing-manufacture	6	3	7	11	13	16	24	2	5	2	4	8	14	10	7	14	10	156
Flax-milling	..	..	..	1	5	15	14	3	..	1	5	4	4	5	13	1	6	77

General Summary for all Industries.

The following table gives a general summary of various particulars as at the 31st March, 1919:

—	Number of Establishments.	Average Number of Employees for Year ended 31st March, 1919.	Total Amount paid in Salaries and Wages during Year ended 31st March, 1919.	Total Horse-power available.	Cost of Materials used or operated upon.	Value of Products.	Approximate Value of Land, Buildings, Machinery, and Plant.
			£		£	£	£
Animal food—							
Meat freezing and preserving	48	8,130	1,284,343	36,555	12,546,448	14,852,732	4,615,191
Ham and bacon curing	27	273	45,235	502	469,162	514,507	136,401
Fish curing and preserving	13	83	14,450	125	30,536	50,569	29,507
Butter, cheese, and condensed-milk manufacture ..	405	2,859	432,428	13,762	8,107,693	10,056,782	1,597,615
Vegetable food—							
Grain-milling	51	647	109,743	4,255	2,061,762	2,467,261	542,688
Biscuit and confectionery manufacture	49	1,640	165,041	1,385	537,297	838,226	310,813
Fruit-preserving and jam-making	12	272	35,154	170	170,783	218,019	76,810
Sugar-refining	1	*	*	*	*	*	*
Baking-powder manufacture	4	68	8,791	40	96,858	131,989	12,660
Drinks, narcotics, and stimulants—							
Brewing and malting	56	1,024	205,089	1,931	393,735	739,412	654,215
Colonial-wine making	4	20	2,342	10	1,821	5,416	8,593
Aerated-water and cordial manufacture	112	500	73,447	470	86,273	268,315	208,258
Coffee and spice grinding and preparing	9	65	8,213	183	40,597	63,554	25,517
Tobacco-preparing and cigarette-making	4	32	3,119	12	5,735	16,647	8,353
Sauce, pickle, and vinegar making	15	259	30,463	341	88,146	140,267	61,812
Tea blending and packing	22	210	24,095	41	376,950	427,505	63,422
Animal matters (not otherwise classed)—							
Soap and candle making	18	270	41,384	389	310,962	438,290	84,796
Glue-manufacture	2	*	*	*	*	*	*
Sausage-casing manufacture	21	283	51,250	43	104,441	164,421	31,033
Boiling-down and manure-making	45	473	76,169	1,609	472,168	700,688	294,822

Working in wood—							
Coopering and casemaking	25	370	65,593	868	197,178	331,322	83,299
Sawmilling, sash and door making	301	5,821	1,062,985	18,608	1,054,180	2,329,535	1,954,681
Woodware and turnery manufacture	66	336	54,839	875	91,721	184,885	130,293
Vegetable produce for fodder—							
Grain-crushing	5	40	7,589	217	35,164	49,609	18,532
Paper-manufactures—							
Paper-milling	3	*	*	*	*	*	*
Paper-bag and box making	9	172	18,394	74	38,169	71,487	30,750
Heat, light, and power—							
Gas making and supply	48	1,885	259,925	..	384,807	1,041,345	3,242,467
Electricity generation and supply	45	536	94,913	28,770	297,796	463,560	2,253,260
Electric tramways	10	2,153	384,969	..	441,257†	876,093	2,389,095
Processes relating to stone, clay, glass, &c.—							
Stone-crushing	37	311	49,690	1,284	5,961	81,072	124,780
Lime crushing or burning and cement-making	18	602	111,929	9,232	74,723	329,610	753,543
Brick, tile, and pottery making	68	851	125,634	3,133	17,860	239,881	413,488
Asphalt-making	7	29	5,055	44	18,272	29,304	18,118
Monumental masonry	22	172	26,969	182	27,727	83,329	33,420
Leadlight-making and glass-bevelling	15	89	12,862	111	21,937	50,193	33,516
Electroplating	8	30	3,102	47	2,874	11,018	12,876
Pumice-insulation making	1	*	*	*	*	*	*
Concrete block or pipe and fibrous-plaster making	15	88	13,307	20	12,253	34,392	26,704
Metals other than gold or silver—							
Tinned-plate and sheet-metal working	77	815	117,765	382	277,700	482,442	212,054
Iron and brass founding, boilermaking	36	503	83,216	904	100,173	263,104	179,524
Engineering	132	2,731	422,737	4,408	407,852	1,123,300	786,966
Electrical engineering	13	166	21,472	62	31,606	64,643	24,796
Rangemaking	8	212	32,369	329	36,082	86,694	84,487
Wireworking	15	59	8,401	106	31,153	53,694	33,911
Fencing-standard making	2	*	*	*	*	*	*
Precious metals—							
Jewellery and watch making	53	251	34,353	71	51,585	117,612	112,773
Books and publications—							
Printing, publishing, and bookbinding	259	4,447	686,773	4,476	785,171	2,159,217	1,627,849

* Information not shown where the number of establishments is so small that individual particulars might be identified. † Total expenditure, less wages.

GENERAL SUMMARY FOR ALL INDUSTRIES—*continued.*

	Number of Establishments.	Average Number of Employees for Year ended 31st March, 1919.	Total Amount paid in Salaries and Wages during Year ended 31st March, 1919.	Total Horse-power available.	Cost of Materials used or operated upon.	Value of Products.	Approximate Value of Land, Buildings, Machinery, and Plant.
			£		£	£	£
Musical instruments—							
Piano, &c., making and repairing	9	61	7,466	24	5,770	18,005	21,350
Ornaments and minor art products—							
Picture-frame making	31	83	12,712	16	18,225	42,652	46,107
Basket, perambulator, &c., making	18	116	12,622	14	15,536	43,770	27,275
Equipment for sports and games—							
Billiard-table making	3	*	*	*	*	*	*
Designs, medals, type, and dies—							
Engraving and stamp-making	14	56	7,758	23	5,551	22,016	26,406
Ammunition and explosives—							
Ammunition, explosives, and fireworks making	1	*	*	*	*	*	*
Machines, tools, and implements—							
Agricultural-machinery making	22	830	128,185	546	163,331	380,044	192,587
Brush and broom making	10	188	22,776	180	45,297	82,835	30,428
Carriages and vehicles—							
Coachbuilding	129	833	119,712	648	128,595	308,121	268,610
Motor and cycle engineering	255	1,366	193,149	952	220,606	571,074	714,271
Harness, saddlery, and leatherware—							
Saddlery and harness making	67	453	63,809	55	137,907	237,134	112,703
Leather-goods manufacture	10	103	11,097	4	35,706	59,258	18,716
Tanning, fellmongering, and wool-scouring	65	1,403	229,294	2,963	3,119,665	3,662,659	379,198
Ships, boats, and their equipment—							
Ship and boat building	22	1,217	156,985	607	123,918	305,622	78,397
Sail, tent, and oilskin making	34	235	26,199	93	129,366	174,670	102,065
House-furnishings—							
Furniture and cabinet making	219	1,585	231,565	2,010	322,479	692,993	405,899
Blindmaking	4	13	1,576	6	5,314	9,383	4,951
Mattress-making	11	213	24,890	198	78,742	104,525	33,444
Rug-and mat making	2	*	*	*	*	*	*

Chemicals and by-products—							
Ink-manufacture	2	*	*	*	*	*	*
Starch-manufacture	2	*	*	*	*	*	*
Chemicals-manufacture	13	139	16,998	172	60,329	95,594	47,805
Paint and varnish manufacture	6	24	3,723	95	14,339	27,320	18,275
Sheep-dip manufacture	1	*	*	*	*	*	*
Match-manufacture	2	*	*	*	*	*	*
Boot-polish manufacture	5	44	4,765	11	24,330	66,305	8,167
Patent medicines and preparations manufacture	16	169	20,540	153	74,057	126,948	37,593
Textile fabrics—							
Woollen-milling	10	1,887	233,170	3,452	564,075	956,434	456,551
Flock-milling	7	28	3,438	198	11,018	18,521	9,526
Apparel—							
Tailoring	335	2,677	285,867	35	426,043	914,170	679,901
Dress and millinery making	341	3,224	197,988	84	330,383	652,170	421,151
Boot and shoe making	75	2,427	321,838	1,197	718,316	1,199,897	313,350
Hosiery-making	10	177	17,529	87	61,158	103,401	30,108
Umbrella-making	10	57	5,328	4	17,428	32,842	24,953
Clothing and waterproof making	156	4,662	366,982	613	968,096	1,498,132	441,987
Fibrous materials—							
Rope and twine making	7	197	27,410	511	131,883	172,070	61,997
Bag and sack making	2	*	*	*	*	*	*
Flax-milling	77	1,430	234,074	3,827	217,281	681,369	814,305
Industries (included above) for which the number of schedules received was so small that operations of individual establishments might be identified	..	1,081	149,819	4,044	1,565,917	2,040,081	311,069
Miscellaneous (not included above)	35	158	21,082	149	344,555	422,551	76,984
Totals	4,254	66,910	9,475,943	158,996	40,429,784	58,374,507	29,559,817

* Information not shown where the number of establishments is so small that individual particulars might be identified.

Character of Organization.

As previously mentioned, a number of small repair-shops in some industries have this year been omitted from the statistics, and as these were practically all either under individual ownership or carried on as partnerships, this will account for a considerable portion of the apparently large decrease in the number of establishments thus organized. Details for the last three collections are as follows:—

Character of Organization.	1910–11.		1915–16.		1918–19.	
	No.	Output.	No.	Output.	No.	Output.
		£		£		£
Individual	2,076	4,498,825	2,222	5,371,479	1,661	5,706,054
Private firm or partnership	1,126	4,706,066	1,042	3,881,718	921	4,693,331
Public registered company	566	15,635,535	445	21,623,870	447	23,179,563
Private registered company	433	4,062,757	595	6,833,220	761	13,744,611
Municipal ..	201	2,825,819	366	7,743,897	70	1,334,586
Co-operative and miscellaneous					394	9,716,362
Totals	4,402	31,729,002	4,670	45,454,184	4,254	58,374,507

SECTION XXII.—INDUSTRIAL.

Issues of this book for some few years prior to 1915 contained a schedule of the Acts in force coming within the definition of "labour laws," together with those statutes now repealed and incorporated in existing laws. Detailed references to the principal labour laws were also given. Reference to wages will be found in the section on "Wages" in this issue.

Arbitration Court and Conciliation Councils.

The business dealt with by the Arbitration Court and Conciliation Councils during the year ended the 31st March, 1920, may be summarized as follows:—

	Number of Cases.
Industrial agreements	.. 51
Recommendations of Conciliation Councils ..	.. 168
Awards of Arbitration Court	.. 131

The number of cases brought before Magistrates during the year ended the 31st March, 1920, in regard to enforcement of awards or breaches of the Industrial Conciliation and Arbitration Act was 121. The awards and agreements in force as at the 31st March, 1920, totalled 530.

Councils of Conciliation.

The table following shows the work performed by Commissioners and Councils of Conciliation during the year ended the 31st March, 1920:—

	Industrial District.			Total.
	Northern and Taranaki.	Wellington, Marlborough, Nelson, and Westland.	Canterbury, and Otago and Southland.	
Industrial agreements arrived at and filed under section 26 by parties through the Commissioner alone	4	5	..	9
Disputes dealt with by Conciliation Councils:—				
Industrial agreements filed under section 26	4	3	..	7
Recommendations fully accepted and forwarded to the Court to be made into awards	27	21	61	109
Recommendations substantially accepted and referred to Court to make awards	19	17	10	46
Only minor recommendation or no recommendation made	2	4	7	13
Totals	56	50	78	184

The above table shows that out of 184 disputes dealt with by them 171 (or 93 per cent.) were settled or substantially settled by the Commissioners and Councils of Conciliation.

Decisions of Special Interest by Arbitration Court.

In a case arising out of the influenza epidemic it was decided that, providing the engagement had not been terminated by the requisite notice, an employer is obliged to pay wages to an employee during his temporary absence through sickness, or for the period when places of business were closed by order of the District Health Officer during the influenza epidemic. This ruling, if applied to other cases, is of course subject to the terms of the engagement and to the provisions of any award or industrial agreement affecting it.

War Legislation and Statute Law Amendment Act, 1918, Section 18.—This section provides that the Court of Arbitration may, if it thinks fit, on the application of any industrial union, amend the provisions of an award or industrial agreement with respect to the rates of wages on account of the increase in the cost of living. In a memorandum dated 19th April, 1919, the Court gave an indication of the general principles upon which it is proposed to deal with applications under this section. For the purposes of uniformity it was proposed to fix the basic wages for skilled, semi-skilled, and unskilled workers at 1s. 7½d., 1s. 4½d. to 1s. 6d., and 1s. 3½d. per hour respectively (raised since 31st March, 1920, to 2s., 1s. 8d. to 1s. 10d., and 1s. 7d.), which wages should not be subject to variation during the currency of the award except that in addition a bonus would be given from time to time to compensate for the increase in the cost of living. The Court decided to adjust these bonuses half-yearly as at March and September in each year, taking into accordance the rise or fall in the cost of living as ascertained for the Dominion by the Government Statistician.

Industrial Unions.

Returns of the number and membership of registered industrial unions of employers and workers are compiled annually. A quinquennial statement is given.

Number and Membership of Unions.

At 31st December.	Employers.		Workers.	
	Unions.	Membership.	Unions.	Membership.
1915	141	5,718	389	67,661
1916	141	5,554	378	71,388
1917	145	5,390	382	72,873
1918	147	5,346	370	71,447
1919	139	5,146	380	82,553

Factories.

The number of registered factories in the Dominion on the 31st March, 1920, was 13,490, employees thereat numbering 85,591.

Year.	Number of Factories.	Number of Workers.	Year.	Number of Factories.	Number of Workers.
1915–16 ..	13,214	83,011	1918–19 ..	12,444	82,783
1916–17 ..	12,455	78,188	1919–20 ..	13,490	85,591
1917–18 ..	12,485	79,653			

A table is given showing the number of accidents in factories during the past five years.

ACCIDENTS IN FACTORIES.

Year.	Slight.	Moderate.	Serious.	Fatal.	Total.
1915–16	837	160	65	3	1,065
1916–17	938	144	84	5	1,171
1917–18	509	317	65	10	901
1918–19	795	192	58	8	1,053
1919–20	652	454	105	7	1,218

INDUSTRIAL DISTURBANCES, 1919–20.

There were sixty-five industrial disturbances during the year, including thirty-nine which involved the cessation of work for one day or less.

In addition, considerable unrest prevailed in the principal coal-mines from September, 1919, to February, 1920.

The following remarks are quoted *verbatim* from the annual report of the Labour Department:—

"A good deal of criticism has, of late years, been made respecting the work of the Arbitration Court and also regarding the constitution of that Court. In this connection it may be interesting to point out that the intention of the original Act was primarily to abolish "sweating" by fixing minimum wages for any workers that chose to register thereunder, leaving the ordinary law of supply and demand to determine the actual wages to be paid, and in this the Court has fulfilled its purpose; but the minimum wages have been in many cases forced into what has become a standard wage, with a tendency to levelling the workers' wages up and down towards that amount. The fixing of a standard wage is no doubt practicable enough in unskilled or semi-skilled employments like those of waterside workers and coal-miners, but in skilled occupations some supplementary machinery (such as the setting-up of a shop committee for each establishment) seems to be required to fix the actual conditions, over and above the minimum, for the particular workers concerned, according to their skill."

The majority of unions still preserve their registration under the Industrial Conciliation and Arbitration Act, which makes strikes unlawful. Very few have elected to come under the Labour Disputes Investigation Act which allows a strike after a reasonable time has elapsed. Only four disputes were heard during the year, three being successfully settled.

OPERATIONS OF CERTAIN ACTS.

Factories Act.—There were in 1919–20 thirty-one prosecutions, resulting in thirty convictions.

Shops and Offices Act.—During the year 1919–20 there were 100 prosecutions under the Act. Convictions were obtained in ninety-three of these.

Scaffolding Inspection Act.—Eight hundred and ninety-seven notices of intention to erect scaffolding were received by the Department of Labour during the year ended the 31st March, 1920. Fifty-six accidents were reported under the Act. Of this number one was fatal; and five were of serious

character. Five prosecutions were made under the provisions of the Act, resulting in convictions in each case.

Workers' Compensation Act.—Twenty-six cases were dealt with under this Act, as compared with twenty-nine during the previous year.

Footwear Regulation Act.—This Act makes illegal the sale of leather or apparently leather footwear unless the sole is of leather, or if not branded legibly with a statement of the materials used. Few complaints were received under this heading.

Rent-restriction.—The War Legislation Amendment Acts of 1916, 1917, and 1918 contain provisions calculated to prevent undue increases of rent and other hardships in connection with housing. Under these Acts 320 applications were received in the year 1919–20 for reduction of rents charged for dwellinghouses. No fewer than 174 of these were from Wellington. Action was taken in 242 cases, and in some 157 instances the increase was decided to be unjustified and rents reduced accordingly. The Act has proved of considerable benefit to tenants and returned soldiers. It has, however, undoubtedly had the effect of discouraging the building of houses for letting-purposes, and thus to a considerable extent defeated the very purpose of the Act. Further, in many cases tenants protected by rent-restriction have made considerable profits by subletting portions of their houses.

Shearers' and Agricultural Labourers' Accommodation Acts.—This amending Act came into force on the 1st July, 1920. Inspections made and notices to improve accommodation (under the previous Act) were: Shearers, 716 and 380; sawmill employees, 169 and 31; threshing-mill employees, 39 and 4; flax-mill employees, 77 and 2; agricultural labourers, 219 and 18.

Co-operative Public Works.

The co-operative contract system is somewhat as follows: When a length of railway or road is to be constructed on the co-operative principle the formation-work is divided into sections the size of which depends upon the difficulty of the work. Plans and a simple specification of the work are prepared, also an estimate of the cost based on the rate of wages ruling in the district for similar work. The work, at a price reckoned at so-much per unit of quantity or measurement, is offered to a party of men, who, if they accept, become the contractors. The work done by the men is measured periodically, and full payment made to the party, who divide the money amongst themselves according to the time worked by each workman. The engineer in charge of the work has a certain amount of discretion and control in respect of the character of the men employed, the progress of the work, hours of labour, &c.

The constitution of the party is left very much to the men themselves, and they have power, subject to approval of the engineer, to ballot out any member who proves himself undesirable or inefficient. The Department supplies the men with materials, explosives, &c., at cost price.

When the work is let by direct contract, tenders are publicly invited, but the sections of work included in each contract are more extensive than under the co-operative system, yet not too large to enable parties of working contractors to tender.

The number of labourers and artisans employed under the co-operative system during each month of the year ended the 31st March, 1920, was as follows:—

Month.		Roads.	Railways.	Other Works.	Total.
April,	1919..	1,197	1,538	606	3,341
May,	,, ..	1,371	1,625	664	3,660
June,	,, ..	1,463	1,749	780	3,992
July,	,, ..	1,417	1,798	760	3,975
August,	,, ..	1,498	1,953	715	4,166
September,	,, ..	1,390	1,886	741	4,017
October,	,, ..	1,406	1,907	760	4,073
November,	,, ..	1,483	1,820	754	4,057
December,	,, ..	1,477	1,632	759	3,868
January,	1920..	1,614	1,612	826	4,052
February,	,, ..	1,781	1,708	838	4,327
March,	,, ..	1,839	1,759	784	4,382

The (monthly) average number of men employed since 1892 was as follows:—

Year ended 31st March.	Roads.	Railways, Buildings, &c.	Total.	Year ended 31st March.	Roads.	Railways, Buildings, &c.	Total.
1892 ..	261	527	788	1915 ..	2,494	2,234	4,728
1895 ..	1,103	962	2,065	1917 ..	965	1,875	2,840
1900 ..	1,825	1,243	3,068	1918 ..	788	1,444	2,232
1905 ..	1,407	2,119	3,526	1919 ..	1,042	1,841	2,883
1910 ..	1,762	3,929	5,691	1920 ..	1,495	2,498	3,993

LABOUR DEPARTMENT.—EMPLOYMENT BRANCHES.

MEN'S BRANCHES.

The total number of men for whom employment has been found by the Department of Labour up to the end of March, 1920, is as given in the following statement, which also shows the number of persons dependent upon the men assisted:—

Year ended 31st March.	Men.	Dependants.	Year ended 31st March.	Men.	Dependants.
1892* ..	2,593	4,729	1917 ..	2,966	3,518
1895 ..	3,030	8,883	1918 ..	2,952	3,675
1900 ..	2,147	4,471	1919 ..	3,199	3,005
1905 ..	3,130	3,425	1920 ..	4,205	2,709
1910 ..	8,506	10,164			
1915 ..	7,515	8,342		128,824	162,350

*Ten months only.

Of the 128,824 men assisted to 31st March, 1920, private employment was found for 59,710, while the remaining 69,114 went to works of various kinds for the General Government.

WOMEN'S BRANCHES.

In each of the four chief centres of population—Auckland, Wellington, Christchurch, and Dunedin—women's employment branches of the Labour Department were established in June, 1908. In January, 1909, a branch was opened at Nelson. Each branch is in charge of an experienced female officer, and every assistance is given, free of charge, to women seeking employment. During the year ended the 31st March, 1920, work was found for 1,406 women, making a total of 24,855 women assisted since the initiation of the system. In most cases the employment is domestic service.

SECTION XXIII.—STATE AID TO SETTLERS AND WORKERS.

Advances to Settlers.

The Advances to Settlers Office was established by an Act passed in 1894. An administrative officer called the Superintendent was appointed early in the following year, and a Board set up to advise and co-operate with the Superintendent. Advances can be granted only with the consent of the Board.

The legislation has been amended at different times, and is now embodied in the State Advances Act, 1913. It authorizes the borrowing of moneys for the purpose of lending to settlers, workers, and local authorities. Each year there may be borrowed for advances to settlers £1,500,000, to workers £750,000, and to local authorities £1,000,000.

From the inception of the scheme of advances to settlers in 1894, applications have been received to the number of 63,651 for loans totalling £26,004,047. The Advances Board authorized loans of £18,076,170 to 48,924 applicants, the total actual payments to 31st March, 1919, being £17,957,600, of which £9,972,323 has been repaid in respect of principal. A table is given showing the business to date and for each of the past ten years.

Year ended 31st March.	Applications received.		Loans authorized.		Amount advanced.	Amount repaid.
	Number.	Amount.	Number.	Amount.		
		£		£	£	£
1911	4,957	2,122,749	3,571	1,282,880	1,204,310	726,714
1912	5,355	2,593,084	4,610	2,191,300	2,235,495	1,018,286
1913	3,187	1,164,225	2,114	749,590	937,435	698,938
1914	3,604	1,400,248	2,390	878,855	978,395	710,590
1915	3,870	1,826,265	2,100	749,040	1,136,475	754,810
1916	2,507	982,800	2,022	746,630	814,555	713,177
1917	1,619	660,975	1,412	515,270	589,975	643,751
1918	1,228	511,532	984	353,465	367,160	501,009
1919	1,326	579,022	986	363,875	350,140	529,023
1920	2,841	1,520,128	2,219	1,031,855	808,180	1,118,486
Totals to 31/3/20	66,492	27,524,175	51,143	19,108,025	18,765,780	11,090,809

Not all the advances to settlers are made by the Advances to Settlers Branch of the State Advances Office. Part of the business shown in the above table relates to the Public Debt Sinking Funds Branch and the Advances Office Sinking Fund Branch. The advances to settlers authorized by these three branches during 1919-20 are as follows:—

Branch.	Advances authorized.	
	Number.	Amount.
		£
Advances to Settlers	1,949	862,990
Public Debt Sinking Funds	9	3,840
Advances Office Sinking Fund ..	261	165,025
Totals	2,219	£1,031,855

The advances authorized in each provincial district during the year, and the total to 31st March, 1920, are next shown.

Provincial District.	Advances authorized, 1919–20.		Total Advances authorized to 31st March, 1920.	
	Number.	Amount.	Number.	Amount.
		£		£
Auckland	810	372,165	17,275	6,004,373
Taranaki	88	41,825	5,364	2,488,864
Hawke's Bay	195	99,520	2,541	872,365
Wellington	604	305,525	12,103	4,816,648
Marlborough	44	19,940	1,296	543,205
Nelson	31	12,315	922	288,635
Westland	29	10,900	940	250,165
Canterbury	284	114,810	4,923	1,675,615
Otago—				
Otago portion	68	29,740	2,573	992,400
Southland portion	66	25,115	3,206	1,175,755
Totals	2,219	1,031,855	51,143	19,108,025

Dealing now only with the operations of the Advances to Settlers Branch, it is seen that during the year 1919–20 the advances authorized numbered 1,949, representing a total amount of £862,990. The number of borrowers and the sums actually advanced during the year, classified according to amount, were,—

Category.	Number of Advances.	Amount advanced.
		£
Not exceeding £500	1,016	362,725
Exceeding £500, but not exceeding £1,000 ..	373	257,520
" £1,000, " £2,000 ..	28	39,900
Totals	1,417	£660,145

The nature of the security upon which these advances were made was as follows:—

Security.	Number of Advances.	Amount advanced.
		£
Freehold	1,154	530,310
Leasehold	259	127,345
Freehold and leasehold combined	4	2,490
Totals	1,417	£660,145

The advances outstanding, classified according to amount, are as follows:—

Category.	Number of Advances.	Amount outstanding.
		£
Not exceeding £500	14,698	3,171,191
Exceeding £500, but not exceeding £1,000 ..	2,645	2,086,871
" £1,000, " £2,000 ..	1,066	1,498,145
" £2,000, " £3,000 ..	102	256,172
Totals	18,511	£7,012,379

The nature of the security for the total amount of advances outstanding on the 31st March, 1920, was,—

Security.	Number of Advances.	Amount outstanding.
		£
Freehold	11,313	5,108,763
Leasehold	6,992	1,784,198
Freehold and leasehold combined	206	119,418
Totals	18,511	£7,012,379

The average freehold advance is £452, the average leasehold advance £257, and the average of advances secured on both freehold and leasehold combined £580.

The number and amounts of current advances on rural and urban and suburban land are,—

	Number.	Amount. £
On rural land	11,531	4,541,052
On urban and suburban land	6,980	2,471,327
Totals	18,511	£7,012,379

The average rural advance is £394, and the average urban and suburban advance is £354.

The gross profits for the year ended the 31st March, 1920, were £64,270, and the cost of management £12,403, being 0·133 per cent., or 2s. 8d. per £100 on the capital employed. The net profits amounted to £50,895.

Advances to Workers.

The total of the advances to workers up to the 31st March, 1920 (including moneys repaid and again advanced), was £3,785,895.

The applications received for loans during the year ended the 31st March, 1920, numbered 1,660, the aggregate amount required being £746,586. Advances authorized during 1919-20 numbered 1,083, representing a total amount of £420,465. The advances actually paid during the year numbered 604, for an aggregate of £225,055. The tenures upon which these loans were made were,—

Tenure.	Number of Loans.	Aggregate Amount. £
Freehold	588	220,980
Leasehold	16	4,075
Totals	604	£225,055

The total number of loans and the aggregate amount authorized in each provincial district are as follows:—

Provincial District.	Advances authorized 1919-20.		Total Advances to 31st March, 1920.	
	No.	Amount.	No.	Amount.
		£		£
Auckland	256	98,905	4,143	1,233,465
Taranaki	38	13,420	443	124,505
Hawke's Bay ..	133	54,005	956	290,355
Wellington ..	308	125,490	3,624	1,125,080
Marlborough ..	21	7,885	424	124,015
Nelson	11	3,125	238	59,485
Westland	..	..	194	42,030
Canterbury	236	92,605	3,264	1,013,435
Otago—				
Otago portion ..	60	19,010	998	282,060
Southland portion ..	20	6,020	450	118,655
Totals ..	1,083	420,465	14,734	4,413,085

The net amount outstanding at the end of the financial year was £2,433,036, secured upon the following tenures:—

Tenure.	Number of Loans outstanding.	Aggregate Amount outstanding. £
Freehold	8,718	2,343,971
Leasehold	514	89,065
Totals	9,232	£2,433,036

The following table gives particulars of the transactions for each of the past ten years, and the total transactions since the passing of the Government Advances to Workers Act on the 29th October, 1906.

ADVANCES TO WORKERS.

Year ended 31st March.	Applications received.		Loans authorized.		Amount advanced.	Amount repaid.
	Number.	Amount.	Number.	Amount.		
		£		£	£	£
1911 ..	2,125	660,892	1,521	473,530	407,760	47,925
1912 ..	2,223	750,772	1,900	612,910	543,840	78,853
1913 ..	1,805	574,493	1,254	397,175	449,260	84,771
1914 ..	1,599	528,240	1,200	339,200	272,860	80,933
1915 ..	1,492	462,065	1,129	337,690	313,025	110,110
1916 ..	1,079	383,365	953	297,630	275,680	115,535
1917 ..	734	266,740	658	210,995	214,965	127,450
1918 ..	555	197,738	411	129,710	125,855	139,485
1919 ..	562	214,415	372	119,555	87,590	147,791
1920 ..	1,660	746,586	1,083	420,465	225,055	368,597
Totals from inception to 31/3/1920	18,956	6,160,556	14,784	4,413,085	3,785,895	1,352,848

ADVANCES TO LOCAL AUTHORITIES.

During the ten years which have elapsed since the system of State advances to local authorities was initiated, 1,830 applications under this head have been received for loans totalling £7,137,827. Loans authorized, 1,351 in number, have aggregated £3,972,069, of which £3,411,745 has been actually advanced. Repayments to 31st March, 1920, have totalled £302,063, leaving an indebtedness of £3,109,682 in respect of principal moneys.

ADVANCES TO LOCAL AUTHORITIES.

Year ended 31st March.	Applications received.		Loans authorized.		Amount advanced.	Amount repaid.
	Number.	Amount.	Number.	Amount.		
		£		£	£	£
1911	429	3,572,585	193	947,770	405,195	1,172
1912	257	1,184,133	227	1,047,484	790,485	8,010
1913	93	136,513	87	181,795	494,135	20,781
1914	167	166,165	72	84,970	259,430	29,600
1915	77	222,070	48	254,430	237,285	29,800
1916	170	263,858	164	238,970	285,410	35,192
1917	118	154,025	103	127,135	152,310	38,874
1918	110	171,110	109	158,055	128,150	41,681
1919	125	225,988	119	214,300	130,575	46,615
1920	284	1,041,380	229	717,160	311,880	49,034
Totals to 31/3/20	1,830	7,137,827	1,351	3,972,069	3,411,745	302,063

As in the case of advances to settlers, advances to local authorities are made from three distinct sources—viz., the funds of the Advances to Local Authorities Branch of the State Advances Office, the Public Debt Sinking Funds, and the Advances Office Sinking Fund. Of the £130,575 advanced in 1919–20 as shown above, £88,935 came from the Local Authorities Branch, the Advances Office Sinking Fund contributing £52,345, and the Public Debt Sinking Funds £170,600. Of the amount outstanding at 31st March, the Public Debt Sinking Funds claimed £812,617, and the Advances Office Sinking Fund £136,642.

WORKERS' DWELLINGS.

The Workers' Dwellings Acts of 1905 and 1910 made provision for the erection by the State of workers' dwellings on Crown lands purchased for that purpose. Purchase of houses already erected was also provided for. The total number of houses erected and purchased from the inception of the scheme to the 31st March, 1920, was 688, while at that date 127 others were in course of erection. Legislation on the subject of workers' dwellings is now merged in the Housing Act, 1919.

HOUSING ACT, 1919.

Of recent years the Dominion has experienced a serious shortage of housing-accommodation. This position, while alleviated somewhat during war years, was felt all the more acutely when the members of the Expeditionary Forces were repatriated. By the end of 1919 there was a deficit over normal requirements of several thousands of houses. In an effort to overcome this difficulty the Housing Act was passed in November, 1919. A summary of its provisions will be found on pp. 28–29 of this volume. The administration of the Act is in the hands of the Housing Branch of the Labour Department. Owing to the high cost of material, it has been difficult in the extreme to build houses of a good standard, yet within the statutory maximum cost of £775 for a wooden house

and £850 for a brick or concrete one. The difficulty is greatly accentuated by the actual scarcity of both men and material. Regulations have been made by the Board of Trade with a view to preventing non-essential building and allowing concentration of effort on dwellinghouses. A summary of progress to 30th June, 1920, is:—

Town.	Under Construction or Completed.	Negotiations in Progress for.	Town.	Under Construction or Completed.	Negotiations in Progress for.
Auckland ..	15	100	Oamaru ..	8	5
Carterton ..	..	2	Otorohanga ..	..	3
Christchurch	63	37	Paeroa ..	2	..
Dunedin ..	..	25	Palmerston North	10	15
Feilding ..	2	6	Stratford ..	..	6
Hamilton ..	..	25	Taihape ..	.	9
Hastings ..	..	6	Te Aroha ..	..	6
Hawera ..	10	25	Te Awamutu	..	6
Invercargill ..	..	11	Te Kuiti ..	..	3
Levin ..	1	2	Timaru ..	..	11
Marton ..	..	4	Wanganui ..	35	10
Masterton ..	8	40	Winton ..	..	4
Morrinsville ..	..	5	Wellington ..	145	350
Napier ..	1	10			
Nelson ..	8	11			
New Plymouth	10	43	Total ..	318	780

SECTION XXIV.—PENSIONS, SUPERANNUATION, ETC.

Old-age Pensions.

The law relating to old-age, military, and widows' pensions is contained in the Pensions Act, 1913, a consolidation of previous enactments, in the Pensions Amendment Act, 1914, and in the Finance Acts of 1917, 1919, and 1920. The history of legislation dealing with old-age pensions is given in previous issues of this book. The first payments were made in the year 1898.

The minimum age for an applicant is sixty-five for men and sixty for women. In certain cases where young children are dependent upon the applicant a reduction of the age to sixty and fifty-five respectively may be made.

An applicant must also have resided continuously in New Zealand for twenty-five years, must be of good character, and must not be possessed of property of a value of £390 or over.

The old-age pension amounts now in general to a sum of £39 per annum. This sum under certain conditions may be augmented or reduced.

The number of old-age pensions in force on the 31st March, 1920, was 19,993, an increase of 121 on the figures for the previous year. The annual liability was £731,735, being an average of £36 12s. per pension. The total payment in respect of old-age pensions during the year was £732.968. A quinquennial summary is—

At 31st March,	Pensioners.	Amount paid during Year. £	Cost per Head of Popul'n. s. d.	At 31st March,	Pensioners.	Amount paid during Year. £	Cost per Head of Popul'n. s. d.
1911 ..	16,020	383,393	7 7	1916 ..	19,804	479,339	8 9
1912 ..	16,649	406,256	7 10	1917 ..	19,697	480,230	8 9
1913 ..	16,509	415,761	7 10	1918 ..	19,960	643,177	11 8*
1914 ..	18,050	416,776	7 7	1919 ..	19,872	743,063	13 4*
1915 ..	19,352	460,814	8 5	1920 ..	19,993	732,968	12 6*

* Including allowance under Finance Act, 1917.

The total payments to the 31st March, 1920, aggregated £7,928.788.

Widows' Pensions.

The Widows' Pensions Act, 1911, came into operation on the 1st January, 1912. The scope of this Act has been widened by various further amendments.

Applicants for widows' pensions must be British subjects of good character, and applications require to be lodged with the local Registrar of Pensions, and to be investigated by a Magistrate, who alone has power to grant pensions. The term "widow" includes a woman whose husband is detained in a mental hospital.

The maximum pension payable is 7s. 6d. weekly to a widow with one child under fourteen years of age, with 7s. 6d. weekly added for each additional child under fourteen. The term "child" includes a stepchild or a child legally adopted during the lifetime of the husband of the applicant.

The number of widows' pensions in force on the 31st March, 1920, was 3,444, the annual value of these being £185,968. The gross payments during the year were £136,815.

The figures for the last five years are as follows:—

Year ended 31st March.	Number at End of Year.	Annual Value. £	Annual Payments. £
1916	1,890	37,042	36,357
1917	2,024	39,386	38,016
1918	2,192	73,872*	57,952*
1919	3,211	112,618*	80,773*
1920	3,444	185,968	136,815

* Including allowance under Finance Act, 1917.

The average pension was £54.

Military Pensions (Maori War).

The Military Pensions Act, 1912, was enacted to provide for payment of an annual pension of £36 (now £49) to veterans of the Maori War who have been awarded the New Zealand War Medal for active service in such war. This Act is now embodied in the Pensions Act of 1913 above referred to, which consolidates the law relating to old-age, widows', and military pensions.

The number of pensions in force on the 31st March, 1920, was 939, representing an annual value of £43,294. The payments on account of military pensions during the year aggregated £45,085. The figures for five years are,—

Year ended 31st March.	Number at End of Year.	Annual Value. £	Annual Payments. £
1916	1,323	47,623	48,273
1917	1,232	44,352	45,674
1918	1,153	53,208*	50,734*
1919	1,040	47,814*	50,488*
1920	939	43,294*	45,085*

* Including allowance under Finance Act.

Miners' Pensions.

The Miner's Phthisis Act, 1915, as amended by the Finance Acts, 1919 and 1920, provides for a pension to any miner who is totally incapacitated for work owing to miner's phthisis (pneumoconiosis) contracted while working as a miner in New Zealand.

The rates of pension payable are—

To a single man or widower without children under 14, £1 5s. a week.
To a married man or widower with children under 14, £1 15s. a week.

War Pensions.

The War Pensions Act, 1915, as amended, provides for the payment of pensions on the conditions hereinafter set out:—

(1.) To disabled members of the New Zealand Forces.
(2.) To dependants of disabled, deceased, or missing members of the New Zealand Forces.

"Member of the Forces" may include—

(*a.*) A member of any New Zealand Expeditionary Force raised for service beyond New Zealand in the late war.
(*b.*) A member of any New Zealand Naval Force raised for service beyond New Zealand in the late war.
(*c.*) A member of the New Zealand Army Nursing Service who, while domiciled in New Zealand, has served beyond New Zealand in the late war and was in the pay of the New Zealand Government.

(*d.*) A member of the New Zealand Defence or Naval Forces temporarily attached to any other portion of His Majesty's Forces who has served beyond New Zealand in the late war and was in receipt of pay from the Imperial Government.

(*e.*) Any person, not being a member of any New Zealand Expeditionary or Naval Force, who, while domiciled in New Zealand, has served beyond New Zealand in the late war and was in receipt of pay from the New Zealand Government.

(*f.*) Any person, not being a member of any New Zealand Expeditionary Force, who has been engaged on active military service in any capacity in New Zealand in connection with the late war.

The pensions payable are set out in detail in the following schedules :—

RATES OF PENSION IN CASE OF DEATH.

Rank or Rating.	Weekly Pension.		
	To the Wife without a Child.	To Wife with a Child or Children.	To each Child.
	£ s. d.	£ s. d.	s.
Private, bombardier, lance-corporal, trooper, gunner, driver, sapper, trumpeter, bugler Able seaman and equivalent ratings .. .. Corporal .. .. Farrier, shoeing-smith, saddler, or fitter	1 10 0	2 0 0	10
(If bombardier, lance-corporal, gunner, or private) Lance-sergeant (not paid as such) .. .. Leading seaman and equivalent ratings	1 11 0	2 1 0	10
Sergeant, farrier-corporal, shoeing-smith corporal, saddler-corporal, corporal-fitter, farrier-sergeant, saddler-sergeant, armourer-sergeant, sergeant-fitter Lance-sergeant (paid as such) .. .. .. Petty officer and equivalent ratings	1 12 0	2 2 0	10
Squadron, battery, or company sergeant-major, quartermaster-sergeant, colour-sergeant, staff sergeant, pay-clerk Chief petty officer and equivalent ratings ..	1 14 0	2 4 0	10
Regimental sergeant-major, regimental quartermaster-sergeant Warrant officer and equivalent ranks (Navy) ..	1 15 0	2 5 0	10
2nd lieutenant, lieutenant (Army) .. .. Commissioned warrant officer and equivalent ranks; sub-lieutenant and equivalent ranks (Navy)	2 5 0	2 15 0	10
Captain (Army) .. .. Lieutenant under eight years' seniority and equivalent ranks (Navy)	2 10 0	3 0 0	10
Major .. .. Lieutenant of eight years' seniority and equivalent ranks (Navy)	2 17 0	3 7 0	10
Lieutenant-colonel .. .. Captain under three years' seniority and equivalent ranks; commanders and equivalent ranks (Navy)	3 6 0	3 16 0	10
Colonel .. .. Captain of three years' seniority and equivalent ranks (Navy)	3 8 0	3 18 0	10
Brigadier-general, major-general .. .. Commodores, first and second class; rear-admiral and other equivalent ranks	3 10 0	4 0 0	10

RATES OF PENSION IN CASE OF DISABLEMENT.

Rank or Rating.	Maximum Weekly Pension.		
	To the Member.	To the Wife.	To each Child.
	£ s. d.	£ s. d	s.
Private, bombardier, lance-corporal, trooper, gunner, driver, sapper, trumpeter, bugler	2 0 0	1 0 0	10
Able seaman and equivalent ratings ..			
Corporal			
Farrier, shoeing-smith, saddler, or fitter (If bombardier, lance-corporal, gunner, or private)	2 0 0	1 0 0	10
Lance-sergeant (not paid as such) ..			
Leading seaman and equivalent ratings..			
Sergeant, farrier-corporal, shoeing-smith corporal, saddler-corporal, corporal-fitter, farrier-sergeant, saddler-sergeant, armourer-sergeant, sergeant-fitter	2 0 0	1 0 0	10
Lance-sergeant (paid as such) ..			
Petty officer and equivalent ratings ..			
Squadron, battery, or company sergeant-major, quartermaster-sergeant, colour-sergeant, staff sergeant, pay-clerk ..	2 0 0	1 0 0	10
Chief petty officer and equivalent ratings			
Regimental sergeant-major, regimental quartermaster-sergeant	2 0 0	1 0 0	10
Warrant officer and equivalent ranks (Navy)			
2nd lieutenant, lieutenant (Army) ..			
Commissioned warrant officer and equivalent ranks; sub-lieutenant and equivalent ranks (Navy)	2 2 6	1 1 3	10
Captain (Army)			
Lieutenant under eight years' seniority and equivalent ranks (Navy)	2 5 0	1 2 6	10
Major			
Lieutenant of eight years' seniority and equivalent ranks (Navy)	2 12 0	1 6 0	10
Lieutenant-colonel			
Captain under three years' seniority and equivalent ranks; superiors (Navy)	3 1 0	1 10 6	10
Colonel			
Captain of three years' seniority and equivalent ranks (Navy)	3 3 0	1 11 6	10
Brigadier-general, major-general ..			
Commodores, first and second class; rear-admiral and other equivalent ranks	3 5 0	1 12 6	10

The gross annual value of the pensions in force at the 31st March, 1920, was £1,869,365. A summary follows:—

SUMMARY OF ANNUAL LIABILITY AT 31ST MARCH, 1920.

Class of Pension.	Number.	Annual Value.	Average Pension.
		£	£
Soldiers (permanent)	2,130	126,510	59
Soldiers (temporary)	23,144	1,223,342	53
Dependants (temporary)	1,517	88,473*	58
Widows of soldiers	2,075	238,693†	115
Other dependants of deceased soldiers ..	5,705	192,347	34
Totals	34,571	1,869,365	54

* Including the pensions of 1,452 children. † Including the pensions of 2,313 children.

Including the 3,765 children, the average of the grand total 38,336 pensions in force on the 31st March, 1920, is £49 per annum.

Information as to number and rate of war pensions in force at 31st March, 1920, is given in the following table. The rates including the bulk of the pensions only are quoted.

TABLE SHOWING THE NUMBER OF WAR PENSIONS IN FORCE AT EACH RATE ON 31ST MARCH, 1920.

Rate (nearest £1).	Soldiers (Permanent and upwards of Twelve Months).	Soldiers (Temporary).	Wives and Parents on Account of Disablement.	On Account of Death.	
				Widows (including Children's Pensions).	Parents and other Dependants.
£ £					
151–160	33	198	29	203	..
101–110	70	2,290	88	17	9
90–95	52	217	6	9	3
83	334	..	..	37	4
78	233	3,012	267	523	152
65	98	506	24	7	62
52	455	5,745	274	42	400
39	226	5,424	239	41	1,520
26	353	5,646	222	194	3,283
Total, including others at rates not quoted above	2,130	23,144	1,517	2,075	5,705

SOUTH AFRICAN VETERANS' WAR PENSION.

Section 13 of the Finance Act, 1919, provides that every person permanently resident in New Zealand who on the passing of this Act was in receipt of a pension or allowance under Part IX of the Defence Act, 1909, in respect of military service in South Africa, shall be entitled to a pension under the War Pensions Act, 1915, in the same manner as if he had been a member of the Forces within the meaning of that Act. Any pension under this section shall not be of such amount that the total amount receivable (including any Imperial

pension) would be more than the pension payable if he had been a member of the Forces within the War Pensions Act, 1915.

Police Pensions.

Section 14 of the Finance Act, 1919, makes provision that, in the event of the death of any Police officer by misadventure suffered in the exercise of his duties, an allowance is payable to or on behalf of his widow and children at rates not exceeding those payable if he were a member of an Expeditionary Force under the Expeditionary Force Act, 1915. This Act is retrospective, but in this case any compensation already paid is taken into account. The scale for disablement is also similar to the war-pensions scale.

Applications are made to the same authorities, and the procedure is the same as in the case of war pensions.

Superannuation Funds.

The question of providing pensions for the public and semi-public servants of the Dominion on their retirement has received a good deal of attention in recent years. The schemes now in force embrace the State Railways (1903), Public Service (1908) including Police (1899), and Teachers (1906), while the various local bodies are empowered to establish schemes under the Local Authorities Superannuation Act, 1908.

Public Service Superannuation Fund.

The Public Service Superannuation Act, 1907, now embodied in the Public Service Classification and Superannuation Act, 1908, which with its amendments includes all branches of the Public Service except the Railway Department and so much of the Education Department as is included in Part IX of the Education Act, 1908 (mainly Inspectors and teachers of public schools), came into force on the 1st January, 1908. The scheme, although optional on the part of public servants permanently employed at that date, is compulsory on all persons appointed thereafter.

The principal benefits are—

(1.) A pension for every year of service equal to one-sixtieth of the average annual salary for the last three years, payable (*a*) after forty years' service, or (*b*) at age sixty-five, or (*c*) on retirement owing to ill health. The maximum pension is not to exceed two-thirds of the salary, or, in the case of entrants after the 24th December, 1909, £300 per annum.

(2.) A pension of £18 per annum to the widow of a contributor or pensioner during widowhood, and £13 per annum for each child under the age of fourteen.

Females may retire after thirty years' service or at the age of fifty-five, while the retiring-age may be reduced in certain cases for both males and females. Special pensions may be given in the case of a member of the Police Force for injuries received on duty.

The contributions vary with the age on joining the fund: For ages under thirty they are 5 per cent. of the salary; ages thirty and under thirty-five 6 per cent.; thirty-five and under forty, 7 per cent.; forty and under forty-five, 8 per cent.; forty-five and under fifty, 9 per cent.; fifty and over, 10 per cent.

On the 31st December, 1919, there were 14,216 contributors paying £184,928 per annum into the fund. The pensioners at the same date

numbered 1,685, and were entitled to £120,459 per annum, made up as follows:—

	Number.	Pension. £
Retired for age or length of service	707	97,398
Retired for ill health	128	9,585
Police injured on duty	5	521
Widows	394	7,092
Children	451	5,863
	1,685	£120,459

The following table contains particulars of the public servants who were contributing to the fund at the end of the year 1919, grouped according to their respective rates of contribution:—

Rate per Cent. of Contribution as provided by the Act.	Number. Male.	Female.	Total.	Annual Salary.	Annual Contributions.
				£	£
5	7,992	1,870	9,862	1,801,664	90,083
6	1,351	167	1,518	417,540	25,053
7	1,017	111	1,128	329,971	23,098
8	740	95	835	252,887	20,231
9	507	40	547	174,969	15,747
10	310	16	326	107,164	10,716
Totals ..	11,917	2,299	14,216	3,084,195	184,928

Accumulated funds at the end of 1919 amounted to £1,288,198. Interest was earned on the mean funds at a rate of £5 5s. 10d. per cent.

The report of the Superannuation Board for the year 1919 shows that up to the end of that year the total amount saved to the Consolidated Fund since the initiation of the superannuation scheme has been £364,532, the State subsidies to the fund aggregating £482,500, or £117,968 in excess of the actual saving referred to, which is reckoned only to the date the contributors joined the fund.

The Police Provident Fund, which was established on the 1st December, 1899, under the Police Provident Act, 1899, was merged in the Public Service Superannuation Fund on the 1st April, 1910, and members of the Police Force contributing at that date now pay the same contributions and receive the same benefits (plus the special allowance if injured on duty) as other members of the Public Service.

Teachers' Superannuation Fund.

Since the passing of the Public Service Classification and Superannuation Amendment Act, 1908, the benefits from the Teachers' Superannuation Fund have been brought into line with those of the Public Service Superannuation Fund. Existing contributors had, however, the right of electing to remain subject to the provisions formerly in force.

There are a few slight differences between the Public Service and the Teachers' Funds, the chief being that (1) the service of the teachers need not be continuous; (2) no pensions are payable on retirement for ill health

unless the service exceeds fifteen years; and (3) in the case of reduction of status owing to age or infirmity, there is no provision that the pension must be computed on the higher salary as in the Public Service Fund.

The total subsidies paid to the fund by the Government amounted on 31st December, 1919, to £178,000. On the 31st December, 1919, there were 5,019 contributors, the annual contributions amounting to £72,172.

The retiring and other allowances were 698, representing a charge of £51,033 per annum, made up of—

	Number.	Amount of Pension. £
Retired for age or length of service ..	475	51,026
Retired for ill health	94	9,029
Widows	117	2,119
Children	100	1,300
	786	£63,474

GOVERNMENT RAILWAYS SUPERANNUATION FUND.

The Government Railways Superannuation Fund was established on the 1st January, 1903, by the Government Railways Superannuation Fund Act, 1902, now embodied in the Government Railways Act, 1908.

The pension is here also one-sixtieth of the annual rate of pay for every year of service, but the retiring age is sixty for both males and females, instead of ages sixty-five and fifty-five respectively as in the Public Service. The only other differences of importance are that the annual allowances to widows and children are paid only on the death of contributors before retiring on a pension, and that the pension is computed on the last salary except where the contributor has served in a lower grade within the previous five years, in which case the average for seven years is taken.

The number of contributors on the 31st March, 1919, was 10,655, and at that date there were 1,892 persons on the fund, drawing annual allowances amounting to £102,783.

LOCAL AUTHORITIES SUPERANNUATION.

The Local Authorities Superannuation Act, 1908, which came into force on the 10th October, 1908, applies to Borough Councils, County Councils, Town Boards, Road Boards, Harbour Boards, Charitable Aid Boards, tramway companies, or any body possessing rating powers over any district.

So far as can be ascertained, only three local authorities have so far initiated superannuation schemes under the authority of the statute—namely, Wellington Harbour Board, Auckland Harbour Board, and Buller County Council. The subsidies payable by the respective local authorities are as follows:—

Wellington Harbour Board: 65 per cent. of the members' contributions, equivalent to 5 per cent. of the salaries.

Auckland Harbour Board: 60 per cent. of the members' contributions, equivalent to 4 per cent. of the salaries.

Buller County Council: 80 per cent. of the members' contributions, equivalent to 7 per cent. of the salaries.

NATIONAL PROVIDENT FUND.

The National Provident Fund was established by Act in 1910, and came into operation on the 1st March, 1911. The fund is administered by a Board composed of the Hon. the Minister of Finance as Chairman and four

members appointed by the Governor-General, one of whom is the Superintendent of the fund. The main object of the scheme is to provide for annuities in old age. This is supplemented by benefits for the protection of the family from birth to old age.

The system is open to any person between the ages of sixteen and forty-five years residing in New Zealand, and whose average income during the three years prior to joining has not exceeded £250 per annum. There is no medical examination on entry, and the method of joining is extremely simple, the applicant having merely to fill in a form at a postal money-order office or local office of the Fund, and pay a first weekly contribution.

The following benefits are payable:—

(1.) After contributing for twelve months, a payment not exceeding £6 for medical attendance and nursing on the birth of a contributor's child or children.

(2.) After contributing for five years, an allowance, after three months' incapacity to work, of 7s. 6d. per week for each child of a contributor under fourteen years of age. Payable independent of any allowances due from friendly societies. No contributions payable while in receipt of incapacity allowance.

(3.) After contributing for five years, an allowance, on the death of a contributor, of 7s. 6d. per week for each child until fourteen years of age, and 7s. 6d. for the widow so long as any child is under fourteen years of age.

(4.) On reaching age sixty, a pension of 10s., 20s., 30s., or 40s. per week, according to the scale of contributions. The payment of this pension will not affect any rights under the Old-age Pensions Act.

The contributions range from 9d. per week at age sixteen last birthday, 1s. 1d. at age twenty-two, 1s. 4d. at twenty-five, and so on to age forty-five, for the 10s. pension, the rate being two, three, or four times as much if a higher pension is applied for. A contributor may decrease his pension after entry, or he may increase it at any time whilst he is under the age of forty-five years.

The result of the fund's operations up to the end of the ninth year is indicated in the following table:—

At End of—	Number of Contributors.	Annual Rate of Contribution payable.	Amount of Fund.
		£	£
1911	550	3,172	1,826
1912	2,660	11,727	10,038
1913	5,791	22,719	29,327
1914	6,858	26,520	53,718
1915	8,101	31,875	83,000
1916	9,847	38,664	122,361
1917	12,124	56,707	176,210
1918	13,410	69,486	246,901
1919	16,154	91,450	338,729

A total amount of £16,167 was paid out through the fund for the year ended the 31st December, 1919, in respect of maternity grants, the amount to contributors being £3,959, and to the members of approved friendly societies, £12,208.

SECTION XXV.—BANKING.

Banks of Issue.

There are six banks of issue trading in New Zealand, two of these institutions, the Bank of New Zealand and the National Bank of New Zealand, being incorporated by special Acts of the General Assembly of the Dominion. The Bank of New Zealand has branches in London, Australia, Fiji, and Samoa, while its branches and agencies within the Dominion number 216. The other five banks have between them 206 establishments within the Dominion, making a total of 422, or an average of one bank to every 2,693 inhabitants, excluding Maoris.

Capital and Reserve Funds.

The paid-up capital of the above banks, their reserve funds, and the rate and amount of their last dividend as on the 31st December, 1919, were as follows:—

Bank.	Paid-up Capital.	Rate per Cent. per Annum of Last Dividend and Bonus.	Amount of Last Half-yearly Dividend and Bonus.	Reserve Fund.
Bank of New Zealand—	£	Per Cent.	£	£
4-per-cent. stock guaranteed by New Zealand Government	529,988	..	..	..
"A" preference shares issued to the Crown (Act of 1903)	500,000	10	237,500*	2,345,702
"B" preference shares issued to the Crown (Act of 1913)	250,000	12 and bonus of 3 per cent.		
Ordinary shares ..	1,000,000	12 and bonus of 3 per cent.		
Union Bank of Australia (Limited)	2,500,000	14	140,000	2,288,614
Bank of New South Wales	4,000,000	10	200,000	3,200,000
Bank of Australasia ..	2,000,000	14 and bonus of 12s. per share	170,000	3,071,100
National Bank of New Zealand (Limited)	1,000,000	12 per cent. per annum for half-year, and bonus of 1 per cent.	52,500	874,932
Commercial Bank of Australia (Limited)—				
Ordinary	95,659	..	..	..
Preference	2,117,350	4 (preference only)	42,347	13,060

* Dividend for full year.

Development of Banking.

The development of banking in New Zealand since the year 1857 has been very great. A summary for the years 1857–1919 is as follows:—

Year.	Deposits.	Advances.	Assets.	Liabilities.
	£	£	£	£
1857	343,316	..	419,860	432,494
1870	3,127,769	4,547,217	6,315,354	3,819,670
1880	8,538,935	11,300,404	14,220,275	9,550,177
1890	12,368,610	14,096,446	17,735,259	13,356,598
1900	15,570,610	12,084,744	17,314,535	16,964,582
1910	24,968,761	19,772,656	26,398,927	26,742,081
1914	27,640,507	25,222,127	32,502,312	29,808,349
1915	31,433,653	24,590,171	33,209,484	34,448,272
1916	37,757,917	26,989,644	37,015,486	41,977,619
1917	42,930,713	33,808,309	44,979,615	48,541,961
1918	45,562,939	37,396,623	48,570,126	52,048,732
1919	50,489,444	37,410,156	48,615,209	57,861,393

In 1880 the deposits of these banks were £18 per head of the mean population; in 1914, £25·35; and in 1919, £44·42. The ratio of advances to deposits, which was 132·34 per cent. in 1880, in 1919 was 74·09.

In 1886 the average amount of advances made by the banks was £15,853,420, equal to £27·23 per head of the mean population. The amount for 1919 (£37,410,156) represented £32·81 per head. The largest amount of discounts in any year was £6,061,959 in 1879, a rate of £13·53 per head. In the previous year had occurred the highest rate—£14·22 per head. Both amount and rate for 1919 were the lowest on record. Inflation of deposits and advances during recent years is, of course, a direct result of war conditions.

Liabilities.

The liabilities of the banks of issue for the last ten years are shown in the table following, the figures given referring to New Zealand business only. The liabilities shown represent the average of the four quarters of the year; with the exception that in the figures for 1912 only the last quarter is taken in respect of the Commercial Bank of Australia, as this institution did not commence operations in the Dominion until fairly late in that year

Year.	Notes in Circulation.	Bills in Circulation.	Balances due to other Banks.	Deposits.	Total Liabilities.
	£	£	£	£	£
1910 ..	1,626,094	93,603	53,622	24,968,761	26,742,080
1911 ..	1,677,842	113,582	69,257	26,765,122	28,625,803
1912 ..	1,714,667	111,877	59,721	25,622,083	27,508,348
1913 ..	1,674,333	108,518	75,061	25,733,187	27,591,099
1914 ..	1,998,386	96,012	73,444	27,640,507	29,808,349
1915 ..	2,846,277	105,759	62,580	31,433,653	34,448,272
1916 ..	4,049,527	96,468	73,707	37,757,917	41,977,619
1917 ..	5,410,957	105,895	94,396	42,930,713	48,541,961
1918 ..	6,266,768	123,344	95,681	45,562,939	52,048,732
1919 ..	7,087,545	173,722	110,682	50,489,444	57,861,393

Assets.

The average assets, as shown below, include Colonial Government securities, which in 1919 amounted to £5,692,436.

Year.	Coin and Bullion.	Notes and Bills discounted.	Debts due, exclusive of Bad Debts.	All other Assets.	Total Assets
	£	£	£	£	£
1910	5,035,764	1,741,984	16,698,015	2,923,164	26,398,927
1911	5,195,333	1,792,261	19,467,467	2,978,553	29,433,614
1912	5,338,295	1,847,016	21,062,101	2,948,988	31,196,400
1913 .. .	5,204,266	1,951,665	20,950,633	2,602,368	30,708,932
1914	5,712,751	1,843,217	22,407,029	2,539,315	32,502,312
1915	6,781,006	1,471,808	22,167,162	2,789,506	33,209,483
1916	7,393,917	1,484,356	23,427,562	4,709,651	37,015,486
1917	8,072,279	1,414,585	27,433,164	8,059,587	44,979,615
1918	8,085,961	1,261,203	30,450,147	8,772,815	48,570,126
1919 ..	8,017,159	1,446,299	30,271,421	8,880,330	48,615,209

Deposits and Advances.

The total amount of deposits, &c., taking the average of the four quarters for each of the past ten years, are as follows:—

Year.	Deposits.		Advances.	
	Total Amount.	Per Head of Population.	Total Amount.	Ratio to Deposits.
	£	£ s. d.	£	Per Cent.
1910	24,968,761	25 3 0	19,772,656	79·19
1911	26,765,122	26 7 5	22,601,863	84·45
1912	25,622,083	24 13 2	24,268,634	94·72
1913	25,733,187	24 1 7	24,005,038	93·28
1914	27,640,507	25 7 0	25,222,127	91·25
1915	31,433,653	25 11 10	24,590,171	78·23
1916	37,757,917	34 6 10	26,989,644	71·48
1917	42,930,718	39 1 2	33,808,309	78·75
1918	45,562,939	41 6 2	37,396,623	82·08
1919	50,489,444	44 8 7	37,410,156	74·09

Deposits per head of population in cheque-paying banks in each of the Australian States during 1918 and the three preceding years are shown. Figures for New Zealand are also given by way of comparison.

Deposits per Head in Cheque-paying Banks in Australasia, 1915–18.

State.	1915.	1916.	1917.	1918.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Queensland	39 16 2	37 9 1	43 2 2	49 13 3
New South Wales	36 8 10	42 19 0	44 19 9	45 7 2
Victoria	37 18 6	42 0 6	46 9 9	48 10 5
South Australia	26 19 0	31 6 3	36 14 7	42 6 11
Western Australia	23 7 2	25 11 8	27 12 9	31 9 8
Tasmania	28 12 5	30 9 7	30 2 5	33 4 0
Northern Territory	41 9 1	45 10 9	64 12 10	71 4 6
Total Commonwealth ..	35 6 8	39 5 5	42 15 1	45 5 1
New Zealand	25 11 10	34 6 10	39 1 2	41 6 2

Issue of Notes.

On the 5th August, 1914, an amendment to the Banking Act was passed empowering the Governor-General in Council, from time to time, to make a Proclamation declaring bank-notes to be legal tender within New Zealand.

Immediately on the passing of the amendment referred to, a Proclamation was gazetted declaring notes of all six banks of issue doing business in New Zealand to be legal tender from the 6th August to the 6th September, 1914. Further extensions for short periods were made from time to time until the end of 1917, when the notes of the six banks were declared legal tender until the 31st December, 1922.

Post Office Savings-bank.

In connection with the Post Office in New Zealand a savings-bank has been conducted since the 1st February, 1867. The minimum deposit receivable, except in certain specified cases, is 1s., and no interest is given on any sum less than £1 or in excess of £5,000. Interest on sums up to £500 is paid at the rate of 4 per cent. per annum, and on sums between £500 and £5,000 at the rate of 3½ per cent., for the amount over £500.

The number of post-offices open for the transaction of savings-bank business at the end of 1919 was 794.

There were 118,109 new accounts opened in 1919, and 77,531 accounts were closed during the year. The total number of open accounts at the end of 1919 was 630,783, or one in every 1·95 of the population, excluding Maoris.

The deposits received during the year amounted to £29,758,447, and the withdrawals to £25,962,377. The total sum standing at credit of all accounts on the 31st December, 1919, was £38,393,130, which gave an average of £60 17s. 4d. to the credit of each open account. Information for each of the past ten years is given below.

Year.	Number of Depositors at End of Year.	Total Amount of Deposits during Year.	Total Amount of Withdrawals during Year.	Excess of Deposits over Withdrawals.	Total Amount to Credit of Depositors at End of Year.
		£	£	£	£
1910 ..	380,585	10,708,939	9,695,515	1,013,424	14,104,990
1911 ..	405,566	11,627,368	10,662,046	965,322	15,543,187
1912 ..	432,199	11,725,183	11,449,711	275,472	16,330,257
1913 ..	458,594	11,286,702	11,041,454	245,248	17,131,414
1914 ..	483,262	11,904,323	10,603,018	1,301,305	19,048,029
1915 ..	509,085	13,706,057	11,294,974	2,411,083	22,166,338
1916 ..	538,072	15,576,408	12,957,420	2,618,988	25,603,209
1917 ..	566,351	17,106,529	14,461,169	2,645,360	29,196,390
1918 ..	590,205	18,101,105	14,938,842	3,162,263	33,418,125
1919 ..	630,783	29,758,447	25,962,377	3,796,070	38,393,130

During the past 30-odd years (since 1887) the total amount standing to the credit of depositors at the end of each year has in no case shown a decrease, while the amount standing to credit of depositors has increased from £1,813,085 in 1887 to £38,393,130 in 1919. There has been a corresponding steady increase in the average amount standing to the credit of each depositor.

The number of open accounts (as on the 31st December) for five years, classified according to amounts at credit, is as follows:—

Amount.	1915.	1916.	1917.	1918.	1919.
Not exceeding £20	356,968	369,769	382,689	385,812	394,280
Exceeding £20 and up to £50	55,186	57,216	59,680	61,466	68,331
" £50 " £100	36,047	39,715	43,392	48,178	56,828
" £100 " £200	29,759	34,498	39,813	45,258	50,111
" £200 " £300	13,555	15,443	17,243	20,985	25,340
" £300 " £400	7,346	8,690	9,330	11,518	13,796
" £400 " £500	3,891	4,775	5,152	6,255	7,994
" £500 " £600	2,638	3,149	3,628	4,180	5,331
" £600	3,695	4,817	5,424	6,553	8,772
Totals	509,085	538,072	566,351	590,205	630,783

Accounts above the £600 mark in 1919 included 3,071 between £600 and £700, 1,819 between £700 and £800, 1,186 between £800 and £900, 1,033 between £900 and £1,000, and 1,663 over £1,000.

The securities standing in the name of the Postmaster-General on account of the Post Office Savings-bank Fund on the 31st December, 1919, represented a nominal value of £36,392,202. Most of this fund is invested in Government securities. A summary of the investments is as follows:—

	£	s.	d.
In New Zealand Government securities ..	35,327,253	11	1
In local bodies' securities	1,020,550	0	0
In other securities	44,398	4	9
Total	£36,392,201	15	10

PRIVATE SAVINGS-BANKS.

There are five savings-banks not connected with the Post Office. The total amount deposited in them during the year ended the 31st March, 1920, was £3,308,628, of which the deposits by Maoris comprised £837. The withdrawals reached the sum of £2,981,887. The total amount to the credit of the depositors at the 31st March, 1920, was £3,557,895, of which sum £484 belonged to Maoris. Figures for ten years are as follows:—

Year ended 31st March.	Number of Depositors at End of Year.	Total Amount of Deposits during Year.	Total Amount of Withdrawals during Year.	Excess of Deposits over Withdrawals.	Total Amount to Credit of Depositors at End of Year.
		£	£	£	£
1910* ..	51,534	1,338,336	1,269,973	68,363	1,515,525
1911* ..	54,036	1,420,321	1,337,586	82,735	1,651,275
1913† ..	71,728	1,824,606	1,833,390	— 8,784	1,713,283
1914 ..	74,120	1,478,309	1,461,510	16,799	1,792,108
1915 ..	75,941	1,358,876	1,340,760	18,116	1,876,725
1916 ..	78,024	1,449,938	1,327,364	122,574	2,072,602
1917 ..	81,900	1,631,065	1,374,114	256,951	2,412,465
1918 ..	85,191	1,764,723	1,551,836	212,887	2,720,709
1919 ..	89,203	2,058,360	1,775,531	282,829	3,111,529
1920 ..	95,472	3,308,628	2,981,887	326,741	3,557,895

The minus sign (—) represents excess of withdrawals over deposits.
* Year ended 31st December. † Fifteen months ended 31st March.

Savings-banks Deposits in Australasia.

The deposits in the savings-banks of the Commonwealth on the 31st March, 1920, and of New Zealand on the 31st December, 1919 (Post Office), and on the 31st March, 1920 (private), are shown in the table following. The Australian figures are taken from the Quarterly Summary of Australian Statistics issued by the Commonwealth Statistician. In calculating the deposits per head of population in New Zealand Maoris were omitted from the population, although the total amount on deposit includes deposits by them. The amount deposited by Maoris is very small in proportion to the number of Maoris in the Dominion.

State.	Number of Depositors.	Amount on Deposit at End of Year.	Average Amount per Depositor at End of Year.	Deposits to Credit per Head of Population.
		£	£ s. d.	£ s. d.
New South Wales ..	1,036,112	47,736,585	46 1 5	23 12 8
Victoria	1,002,186	39,926,184	39 16 9	26 12 9
Queensland	359,549	17,337,297	48 4 5	23 17 9
South Australia ..	373,742	14,818,826	39 13 0	31 9 6
Western Australia ..	200,935	6,818,727	33 18 8	20 10 1
Tasmania	103,123	3,439,444	33 7 1	15 15 4
Northern Territory ..	1,100	81,988	74 10 8	17 18 11
Total, Commonwealth	3,076,747	130,159,051	42 6 1	24 13 7
New Zealand	**726,260**	**41,951,025**	**57 15 3**	**36 18 2**

Summary of all Deposits.

If the total deposits in the banks of issue at the end of the year be assumed to be equal to the average deposits for the four quarters of the year, then it may be affirmed that, exclusive of Government moneys, the deposits in the said banks of issue and in the two classes of savings-banks amounted at the end of 1919 to £83,556,519, representing an average of £73 10s. 7d. per head of population, or, including Maoris, £70 8s. 10d. per head. In addition there are the deposits with the building societies, referred to further on in this book, and it is known that there were also deposits with financial companies of which no particulars have been collected.

SECTION XXVI.—INSURANCE.

Life Assurance.

At the close of the year 1919 twelve life-assurance offices were represented in New Zealand.

The New Zealand Government and the Provident Life Assurance Company are the only purely New Zealand institutions, six of the societies having their head offices in Australia, two in England, and two in the United States of America. The Provident Life Assurance Company and four of the Australian offices transact both ordinary life and industrial business. Several of the companies, including the New Zealand Government Office, have branches for assurance against accident.

The following table shows the total ordinary life-assurance business in force in the Dominion at the end of each year 1914–18.

Ordinary Life Assurance.—New Zealand Business, 1914–18.

Year.	Number of Policies in Force, including Annuities.	Amount insured.	Annuities per Annum.	Annual Premium Income, including Annuities.
		£	£	£
1914	156,218	39,654,784	46,939	1,229,398
1915	160,568	40,967,147	39,112	1,274,667
1916	164,245	42,153,414	38,279	1,330,855
1917	164,145	42,885,433	37,956	1,372,278
1918	169,091	45,343,020	37,763	1,447,284

Similar information to the above is given respecting the industrial business of the companies operating in New Zealand.

Industrial Assurance.—New Zealand Business, 1914–18.

Year.	Number of Policies in Force, including Annuities.	Amount insured.	Annual Premium Income, including Annuities.
		£	£
1914	93,488	2,598,905	163,164
1915	99,740	2,811,255	181,533
1916	109,667	3,180,011	206,495
1917	118,823	3,532,075	233,620
1918	129,691	3,998,256	266,568

The number of ordinary life policies in force in 1908 was 127,721, so that the increase in number during the last ten years has been over 32 per cent., while in the industrial business the number of policies increased by over 160 per cent. in the period, the number in force in 1908 having been 49,435. Taking both classes of life assurance together, the policies increased in number by 69 per cent. in the decennium, as compared with an increase in the total

population of 15 per cent. during the same period. A statement of the income and outgo of all the companies operating in the Dominion, so far as ordinary business only is concerned, is also given.

ORDINARY LIFE ASSURANCE.—NEW ZEALAND BUSINESS.—INCOME AND OUTGO.

Year.	Receipts and Expenditure.			Expenses of Management.		
	Total Receipts, excluding Transfers.	Total Expenditure, excluding Transfers.	Excess of Receipts.	Total.	Proportion to Premium Receipts.	Proportion to Total Receipts.
	£	£	£	£	Per Cent.	Per Cent.
1914 ..	1,911,446	1,311,661	599,785	179,261	14·80	9·38
1915 ..	1,922,485	1,397,434	525,051	176,715	14·05	9·19
1916 ..	2,016,607	1,558,320	458,287	174,683	13·20	8·66
1917 ..	2,091,512	1,804,647	286,865	173,407	12·63	8·29
1918 ..	2,225,897	2,054,409	171,488	215,351	14·55	9·67

Results under similar headings are given in the next table for industrial assurance:—

INDUSTRIAL ASSURANCE.—NEW ZEALAND BUSINESS.—INCOME AND OUTGO.

Year.	Receipts and Expenditure.			Expenses of Management.		
	Total Receipts, excluding Transfers.	Total Expenditure, excluding Transfers.	Excess of Receipts.	Total.	Proportion to Premium Receipts.	Proportion to Total Receipts.
	£	£	£	£	Per Cent.	Per Cent.
1914 ..	158,974	94,553	64,421	65,513	43·05	41·21
1915 ..	177,319	93,973	83,346	66,041	39·22	37·24
1916 ..	200,903	109,452	91,451	71,778	37·79	35·72
1917 ..	232,895	128,468	104,427	77,921	35·49	33·46
1918 ..	264,000	156,618	107,382	88,071	35·51	33·36

This class of business has only recently attained any magnitude in the Dominion. The expense rate is exceedingly high, as is common with industrial assurance.

LIABILITIES AND ASSETS.

The New Zealand liabilities of all the institutions in respect of their ordinary life business at the end of 1918 amounted to £15,910,853, including life assurance and annuity funds, £14,767,274, and depreciation, reserve, and other special funds, £317,442.

At the same date the liabilities of the industrial branch of the Provident Life Assurance Company and the Colonial Mutual Life Assurance Society amounted in all to £184,874, of which funds amounted to £161,924.

The three other companies transacting both ordinary life and industrial assurance business did not show separate returns for their industrial branches.

The assets balance the liabilities in every case, and are stated as follows:—

	Ordinary Assurance.	Industrial Assurance.*
	£	£
Mortgages on property ..	6,880,512	22,726
Loans on policies ..	2,095,746	2,194
Government securities ..	3,864,750	15,517
Other investments ..	1,124,928	75,794
Cash	275,658	2,234
Other assets	1,669,259	66,409
Totals	£15,910,853	£184,874

* Two companies only; figures for other companies included under "ordinary assurance."

STATE LIFE INSURANCE.

The Life Insurance Department of the New Zealand Government had at the end of 1919 policies in force to the number of 55,770, including 438 annuities. The total sum assured is £14,123,728, to which are attached reversionary bonuses amounting to £1,423,016, making the total business £15,546,744. The policies in force represent an annual premium income of £423,065.

The total income for 1919 was £701,423, of which £411,306 was premium income, £20,265 annuity purchase-money, and £269,852 interest (less land and income tax).

During the year 648 policies became claims by the deaths of policyholders. the amounts payable totalling £195,341; and 758 policies matured for £180,102, The total sum which has been paid in respect of claims by death and survival since the foundation of the Department fifty years ago has amounted to £7,430,175.

The total assurance, annuity, and endowment funds, apart from a special investment reserve of £288,825, now stand at £5,354,904.

On the 31st December, 1919, the total assets amounted to £5,728,681, and were invested as shown in the following statement, which also gives the distribution of the assets at the end of the previous year for purposes of comparison:—

Class of Investment.	At 31st December, 1918.		At 31st December, 1919.	
	Amount.	Percentage of Total Assets.	Amount.	Percentage of Total Assets.
	£		£	
Mortgages on freehold property..	3,038,552	53·6	2,784,532	48·6
Loans on policies	738,018	13·0	733,943	12·8
Government securities.. ..	1,250,900	22·0	1,635,800	28·6
Local bodies' debentures ..	211,711	3·7	210,597	3·7
Landed and house property ..	134,864	2·4	134,831	2·3
Miscellaneous assets	128,593	2·3	130,179	2·3
Cash in hand and on current account	170,343	3·0	98,799	1·7
Totals	5,672,981	100·0	5,728,681	100·0

The progress of the Department during the last triennium, when compared with the four previous trienniums in respect of total business in force, is as follows:—

Triennium.	Number of Policies.	Sums assured.	Reversionary Bonuses.	Annual Premiums.
		£	£	£
1903–05 ..	45,137	10,468,316	954,751	319,221
1906–08 ..	47,033	10,955,749	1,068,950	331,830
1909–11 ..	49,376	11,514,657	1,168,620	348,285
1912–14 ..	52,273	12,550,465	1,246,610	370,882
1915–17 ..	53,058	12,884,531	1,304,243	387,377

The new business undertaken during the same periods also shows an increase in each succeeding triennium.

NEW BUSINESS OF TRIENNIUM.

Triennium.	Number of Policies.	Sums assured.	Annual Premiums.
		£	£
1903–05..	9,526	2,112,927	70,428
1906–08..	9,739	2,261,767	72,803
1909–11..	10,476	2,487,472	77,477
1912–14..	11,721	3,197,694	89,715
1915–17..	10,129	2,709,163	90,017

ACCIDENT INSURANCE.

At the close of the year 1918 there were thirty-four insurance offices doing accident business in the Dominion. The following table relates only to the accident business transacted within the Dominion:—

Year.	Premium Receipts.	Total Receipts.	Claims paid.	Total Expenditure.
	£	£	£	£
1914	337,190	343,453	162,708	279,771
1915	337,733	344,640	172,049	291,634
1916	349,230	355,289	168,321	302,205
1917	351,103	356,480	179,514	231,027
1918	359,962	363,673	183,291	326,724

STATE ACCIDENT INSURANCE.

The Accident Branch of the Government Insurance Department was opened in 1901. General accident business is undertaken, but the branch was opened more especially with a view to relieve employers of labour of the liability imposed upon them by the Workers' Compensation for Accidents Act, 1900, particulars of which are given in the 1915 issue of this book.

The premium income and claims of the Accident Branch in the last ten years have been as follows:—

Year.	Gross Premium Income	Claims.	Year.	Gross Premium Income.	Claims.
	£	£		£	£
1910	21,364	12,522	1915	23,466	9,092
1911	20,756	10,497	1916	22,378	10,698
1912	23,513	12,016	1917	22,115	9,270
1913	23,677	11,492	1918	21,823	10,880
1914	22,284	9,633	1919	25,414	13,150

The funds, assets, and liabilities of the Government Insurance Department belonging to its Accident Insurance Branch are kept separate and distinct from the main life-insurance business, and powers are vested in the Governor-General to make regulations in regard to tables fixing rates of premium and other details for the conduct of the Accident Insurance Branch.

The funds at the end of 1918 amounted to £6 329. The funds at the end of 1919 stood at £13,887, representing an excess of income over outgo for the year amounting to £7,558. The Reserve Fund, which was constituted under section 20 of the Government Accident Insurance Act, 1908, now stands at £91,808. The total assets at the end of the year amounted to £128,940.

Fire Insurance.

By an Order in Council gazetted 31st July, 1919, the Government Statistician was authorized to collect statistics relating to offices doing fire business in the Dominion, the principal heads of inquiry being as to the stability of companies, revenue account, and fire losses. Information was collected for the year 1918.

It should be remembered that a single year's statistics are of little value in themselves. This is especially true of the year 1918, the figures for which show an exceptionally heavy outgo on account of the Waimarino bush fires, which partially wiped out the Town of Raetihi, together with miles of surrounding country. Statistics were collected in connection with the thirty-four offices carrying on business in the Dominion, five of which were mutual associations.

The total revenue of all offices carrying on fire business in the Dominion during 1918 was £959,410 net and £1,405,134 gross, including premiums £902,008 net and £1,347,772 gross. The last figure represents 0·61 per cent. of the total business underwritten. The total expenditure amounted to £733,176 net and £942,318 gross, including losses £332,394 net and £472,247 gross. The last figure represents 35·04 per cent. of the total premiums charged and 0·22 per cent. of the total risks covered. Net working-expenses amounted to 35·59 per cent. of net premium income and 24·49 per cent. of total net income. Gross working-expenses amounted to 28·90 per cent. of total gross premium income.

There were 2,273 fires and 76 conflagrations (cases where three or more buildings were affected) in connection with which policies of fire insurance were issued. In all 2,964 buildings were affected.

The full detailed tables relating to fire insurance will be found in Volume IV of the Statistics of New Zealand.

State Fire Insurance.

In the year 1903 an Act was passed "to establish a State Fire Insurance Office and to make other provisions for the insurance and protection of insurable property in New Zealand against loss or damage by fire." This Act came into operation on the 4th January, 1905, when the State Fire Insurance Office opened for public business.

As a consequence of the operations of the State Fire Office, the rates on trade risks and the like have been reduced by 10 per cent., and those on dwellings, offices, and similar risks by 33⅓ per cent.

The premium income, after deducting premiums on reinsurances during the ten years 1910–19, has been as follows:—

Year.	Amount of Net Premium Income. £	Year.	Amount of Net Premium Income. £
1910 ..	40,552	1915 ..	71,166
1911 ..	47,745	1916 ..	77,609
1912 ..	54,380	1917 ..	85,321
1913 ..	59,418	1918 ..	90,077
1914 ..	64,646	1919 ..	100,764

The premium rates have remained unaltered during the above years. Debentures to the amount of £2,000 were raised under the authority of the Act governing the Office, but have now been redeemed. The Office has the sum of £68,196 invested in Government debentures and Consols, exclusive of war bonds mentioned below. The accumulated funds amount to £256,338, an increase of £47,318 over the figures for 1918.

The net surplus for the year 1919 (inclusive of income-tax charges), after appropriating a sum of £4,275 to reserve for unearned premiums and £1,000 to a special Investments Fluctuation Reserve, were £51,910 as against £42,265 for 1918. From this sum of £51,910 income-tax amounting to £14,867 is deductible. The total accumulated profit at the 31st December, 1919, amounted to £210,032, as compared with £172,989 on 31st December, 1918.

The loss-ratio of 23·0 per cent. for the year, as compared with 33·2 per cent. for 1918, is still remarkably low, and is considerably less than the average loss-ratio for the whole fire-insurance business of the Dominion.

The total cover (new and renewals) issued during the year amounted to the large sum of over £26,000,000.

The total assets of the Office at the close of 1919 amounted to £288,349, the increase for the year being £43,422. Investments at the 31st December, 1919, amounted to £232,371.

Foreign Insurance Companies.

Every foreign company—*i.e.*, a company registered or established out of New Zealand, and including a local company whose chief office is situated out of the Dominion—which proposes to commence in New Zealand the business of life insurance, whether conjointly or not with any other class of business, must deposit with the Public Trustee a sum of not less than £5,000 nor more than £50,000 in cash or approved securities. The amount of deposit is calculated on the total amount assured by current policies at the rate of £5,000 deposit for every £100,000 assured until the maximum deposit is reached.

A foreign company proposing to carry on fire- and marine-insurance business in the Dominion must first obtain from the Public Trustee a certificate in the form prescribed authorizing the company to transact its business for a period of twelve months from the date of the certificate. The certificate is renewable annually, provided the Public Trustee is satisfied that the company is financially sound.

Accident insurance or insurance business of any class not previously mentioned may be transacted in New Zealand by a foreign company, provided the company deposit with the Public Trustee the sum of £10,000 in cash or approved securities. If the company carries on a life-assurance business as well as accident insurance the last-mentioned deposit must be made in addition to that described in the first paragraph.

All cash deposited with the Public Trustee as deposit shall bear interest, which is payable to the company making the deposit.

SECTION XXVII.—PUBLIC FINANCE.

SUBSECTION A.—REVENUE AND EXPENDITURE.

CONSOLIDATED FUND.

THE total revenue and expenditure of the Consolidated Fund Account for the financial years ended the 31st March, 1911 to 1920, is shown in the following table, together with the excess of revenue for each year and the amount of such excess transferred to the Public Works Fund in the succeeding year:—

Year ended 31st March.	Revenue.	Expenditure.	Excess of Revenue over Expenditure.	Amount of Excess transferred to the Public Works Fund.
	£	£	£	£
1911	10,297,273	9,343,106	954,167	800,000
1912	11,061,161	10,340,368	720,793	500,000
1913	11,734,271	11,082,038	652,233	750,000
1914	12,229,661	11,825,864	403,797	675,000
1915	12,451,945	12,379,803	72,142	350,000
1916	14,507,530	12,493,107	2,014,423	..
1917	18,355,194	14,058,770	4,296,424	..
1918	20,206,222	15,120,288	5,085,934	..
1919	22,352,372	18,673,599	3,678,773	..
1920	26,081,340	23,781,524	2,299,816	..
Totals, 10 years	159,276,969	139,098,467	20,178,502	3,075,000

To the amount of excess revenue for the ten years must be added the sum of £432,315 brought forward from the financial year ended the 31st March, 1910, and an amount of £14,960, representing sinking funds set free (£2,607 in 1915–16 and £12,353 in 1916–17), and making a total of £20,625,777. Deducting the total amount transferred to the Public Works Fund, and a sum of £11,800 for redemption of debentures (£11,400 in 1913–14 and £400 in 1919-20), there remains a balance of £17,538,977 which has been carried forward to the current year's account.

The total amount of excess revenue transferred to the Public Works Fund during the twenty-nine financial years ended the 31st March, 1920, was £10,305,000.

CONSOLIDATED FUND.—REVENUE.

An analysis of the revenue received during each of the past ten financial years is made in the next table.

Revenue under the head of "Taxation" includes Customs and excise duties, land-tax, income-tax, death duties, a tax on bank-note issue, and totalizator-taxes. Revenue from "Services" consists of Railway, Post, Telegraph, and Telephone receipts, and certain fees paid in return for special services. Revenue from "Crown Lands" includes proceeds of sales up to and including 1912–13, but not for subsequent years. The other items

in Crown-lands revenue are rents and national-endowment net revenue. The amounts shown under "Other Sources" include miscellaneous revenue and sundry amounts recovered in respect of expenditure of previous years.

CONSOLIDATED FUND.—REVENUE, 1910-11 TO 1919-20.

Year ended 31st March.	Revenue derived from				Total Revenue.
	Taxation.	Services.	Crown Lands.	Other Sources.	
	£	£	£	£	£
1911 ..	4,837,322	4,743,056	310,894	406,001	10,297,273
1912 ..	5,296,590	4,987,088	311,156	466,327	11,061,161
1913 ..	5,606,829	5,379,966	313,923	433,553	11,734,271
1914 ..	5,918,034	5,551,913	262,846	496,868	12,229,661
1915 ..	5,880,811	5,706,929	318,393	545,812	12,451,945
1916 ..	7,266,966	6,423,452	311,969	505,143	14,507,530
1917 ..	10,549,654	6,885,422	301,758	618,360	18,355,194
1918 ..	12,340,853	6,729,524	306,136	829,709	20,206,222
1919 ..	13,801,643	7,180,258	311,558	1,058,913	22,352,372
1920 ..	16,251,769	8,034,644	331,597	1,463,330	26,081,340
Totals, 10 years	87,750,471	61,622,252	3,080,230	6,824,016	159,276,969

During and since the war period the total revenue shows in each year very large increases. These increases are due in great part to increased taxation, but partly also to increased charges for certain public services, notably railway fares and postal and telegraphic charges.

The total revenue per head of population, and the amounts per head derived from taxation and from other sources, during the past ten years are shown in the following table:—

REVENUE PER HEAD OF POPULATION, 1910-11 TO 1919-20.

Year ended 31st March.	Revenue per Head derived from		Total Revenue per Head.
	Taxation.	Other Sources.	
	£ s. d.	£ s. d.	£ s. d.
1911	4 16 11	5 9 5	10 6 4
1912	5 3 10	5 13 1	10 16 11
1913	5 7 2	5 17 1	11 4 3
1914	5 10 0	5 17 4	11 7 4
1915	5 7 5	6 0 0	11 7 5
1916	6 12 1	6 11 7	13 3 8
1917	9 11 11	7 2 0	16 13 11
1918	11 3 9	7 2 7	18 6 4
1919	12 7 8	7 13 5	20 1 1
1920	14 2 9	8 10 4	22 13 1

CONSOLIDATED FUND.—EXPENDITURE.

Expenditure out of the Consolidated Fund is grouped under two main headings by the Treasury, "Permanent" and "Annual." Permanent appropriations, as the name implies, are those fixed by special Acts of the Legislature. Annual appropriations are voted each year by resolution of Parliament, and include the cost of the business undertakings of the State. In the following table this grouping has not been adopted, as it

is considered more desirable to show the growth of the main items of expenditure during the last ten financial years:—

Year ended 31st March.	Amount expended on					Total Expenditure.
	Working Railways.	Post and Telegraph.	Education.	Interest, &c., on Public Debt.	Other Expenses.	
	£	£	£	£	£	£
1911 ..	2,270,851	911,529	984,854	2,458,452	2,717,420	9,343,106
1912 ..	2,467,718	986,527	1,072,992	2,656,344	3,156,787	10,340,368
1913 ..	2,817,141	1,066,922	1,148,897	2,717,013	3,332,065	11,082,038
1914 ..	3,004,181	1,170,883	1,206,678	2,887,981	3,556,141	11,825,864
1915 ..	2,881,087	1,245,224	1,288,795	3,071,448	3,893,249	12,379,803
1916 ..	2,964,006	1,294,712	1,441,398	3,190,798	3,602,193	12,493,107
1917 ..	2,871,977	1,368,490	1,525,106	4,032,885	4,260,312	14,058,770
1918 ..	3,067,658	1,487,145	1,640,988	4,430,779	4,493,718	15,120,288
1919 ..	3,415,595	1,699,701	1,737,036	6,086,769	5,734,498	18,673,599
1920 ..	4,305,965	1,941,494	2,190,587	7,249,426	8,094,052	23,781,524

The "Other Expenses" group includes old-age pensions, which amounted to £382,792 in 1910–11 and to £732,422 in 1919–20. The charges of the public debt are found to have absorbed 23·87 per cent. of the revenue in 1910–11 and 27·79 per cent. in 1919–20.

Consolidated Fund.—Receipts and Expenditure, 1919–20.

The total receipts of the Consolidated Fund for the financial year 1919–20, including a balance of £15,239,561 brought forward from the previous year, were £41,320,901, and the total expenditure for the same period was £23,781,524, exclusive of £400 set free for redemption of debentures, leaving the large balance of £17,538,976 to carry forward.

Consolidated Fund.—Receipts, 1919–20.

	£	£
From taxation—		
Customs	4,830,325	
Excise	355,403	
Land-tax	1,557,903	
Income-tax	6,369,765	
Death duties	978,095	
Bank-note-issue tax	212,626	
Totalizator-tax	413,654	
Amusements-tax	68,065	
Other taxes	1,465,933	
		16,251,769
From services—		
Railways	5,766,015	
Postal	1,013,026	
Telegraph	604,221	
Telephone	419,318	
Other services	232,064	
		8,034,644
Land revenue—		
Rents, Crown lands	218,757	
Net revenue from national-endowment lands ..	112,840	
		331,597
Miscellaneous		1,463,330
Total		£26,081,340

Taxation represented 62·31 per cent. of the total revenue for the year 1919–20, and services contributed 30·81 per cent. For the last financial year preceding the war (1913–14) the proportions were 48·39 per cent. and 45·40 per cent. respectively.

The amount shown as net revenue from national-endowment lands represents the money received from that source during the previous financial year. The method adopted is to place the amount received under this head each year to a separate account, and, after deducting necessary expenses, to transfer the balance to the Consolidated Fund Account. Of this balance 70 per cent. is expended on education and 30 per cent. on old-age pensions.

CONSOLIDATED FUND.—EXPENDITURE, 1919–20.

	£	£
Charges of the public debt (excluding interest and sinking fund charges paid out of separate accounts)	..	7,249,426
Pensions and allowances—		
Old-age pensions	732,422	
Widows' pensions	136,730	
Military pensions	1,859,179	
Miners' pensions	12,687	
Civil pensions and allowances	35,269	
Civil Service, Railway, and Teachers' Superannuation Funds	154,000	
		2,930,287
Payment to local bodies—		
Subsidies	185,302	
Endowments revenue	37,152	
Under the Land Act	24,275	
Other payments	316	
		247,045
Public instruction—		
Elementary	1,348,999	
Secondary and higher	220,525	
Manual and technical	113,766	
Training of teachers	83,026	
Native schools	51,307	
School buildings	148,975	
Departmental and miscellaneous	145,001	
National-endowment revenue not included above	78,988	
		2,190,587
Judicial and legal—		
Administration of justice	151,880	
Police	307,045	
Prisons	78,844	
		537,769
Railways working-expenses	..	4,305,965
Postal and Telegraph services	..	1,941,494
Defence (including naval defence)	..	528,569
Other expenditure—		
Departmental	3,835,905	
Miscellaneous	14,477	
		3,850,382
Total	..	£23,781,524

A comparison of the revenue of the Consolidated Fund for the year 1919-20 with that of the previous year, together with the percentage which

each item bears to the totals, and the increase or decrease, as the case may be, is given in the table following:—

CONSOLIDATED FUND.—REVENUE FOR 1919–20 COMPARED WITH 1918–19.

Head of Revenue.	Revenue of Consolidated Fund.				Increase for 1919–20.	
	1918–19.	Per Cent. of Total.	1919–20.	Per Cent. of Total.	Numerical.	Per Cent.
	£		£		£	
Taxation—						
Customs and excise	4,104,016	18·36	5,185,728	19·88	1,081,712	26·35
Land ..	1,512,693	6·77	1,557,903	5·98	45,210	2·99
Income ..	6,219,336	27·82	6,369,765	24·42	150,429	2·42
Death duties	869,371	3·89	978,095	3·75	108,724	12·51
Other taxes ..	1,096,227	4·90	2,160,278	8·28	1,064,051	97·06
Services—						
Railways ..	4,975,445	22·26	5,766,015	22·11	790,570	15·89
Postal ..	993,584	4·45	1,013,026	3·89	19,442	1·96
Telegraph ..	615,786	2·75	604,221	2·32	−11,565	1·88*
Telephone ..	373,169	1·67	419,318	1·61	46,149	12·37
Other services	222,274	1·00	232,064	0·89	9,790	4·40
Land revenue ..	311,558	1·39	331,597	1·26	20,039	6·43
Miscellaneous ..	1,058,913	4·74	1,463,330	5·61	404,417	38·19
Totals ..	22,352,372	100·00	26,081,340	100·00	3,728,968	16·68

* Decrease.

The expenditure of the Consolidated Fund Account for the last two financial years is presented in the next table in similar form to the above.

CONSOLIDATED FUND.—EXPENDITURE FOR 1919–20 COMPARED WITH 1918–19.

Head of Expenditure.	Expenditure of Consolidated Fund				Increase for 1919–20.	
	1918–19.	Per Cent. of Total.	1919–20.	Per Cent. of Total.	Numerical.	Per Cent.
	£		£		£	
Charges of the public debt	6,086,769	32·60	7,249,426	30·48	1,162,657	19·10
Pensions and allowances	2,275,841	12·19	2,930,287	12·32	654,446	28·76
Payment to local bodies	252,254	1·35	247,045	1·04	−5,209*	2·06
Public instruction	1,737,036	9·30	2,190,587	9·21	453,551	26·11
Judicial and legal	516,069	2·76	537,769	2·27	21,700	4·21
Railways working-expenses	3,415,595	18·29	4,305,965	18·11	890,370	26·07
Postal and Telegraph services	1,699,701	9·10	1,941,494	8·16	241,793	14·23
Defence (including naval)	448,553	2·40	528,569	2·22	80,016	7·84
Other expenditure	2,241,781	12·01	3,850,382	16·19	1,608,601	71·76
Totals ..	18,673,599	100·00	23,781,524	100·00	5,107,925	27·35

* Decrease.

Public Works Fund.—Receipts and Expenditure.

The receipts of this account consist mainly of the proceeds of loans raised for the construction of public works. From time to time the fund has been aided by substantial transfers of surplus revenue from the Consolidated Fund Account. The receipts for the last ten years are shown in the next table.

Public Works Fund.—Receipts, Ten Years.

Year ended 31st March.	Amounts received.			Total Receipts.
	From Loans.	Transfers from Consolidated Fund.	Other Sources.	
	£	£	£	£
1911	2,590,140	800,000	6,508	3,396,648
1912	744,307	500,000	12,149	1,256,456
1913	2,420,685	750,000	130,044	3,300,729
1914	2,763,884	675,000	39,867	3,478,751
1915	1,857,742	350,000	16,749	2,224,491
1916	3,166,830	..	20,324	3,187,154
1917	1,095,000	..	10,837	1,105,837
1918	1,025,100	..	66,095	1,091,195
1919	1,180,000	..	60,680	1,240,680
1920	2,082,000	..	161,389	2,243,389

In addition to the amounts shown above, the sum of £6,430,000 was transferred during the years 1891–92 to 1907–8 from the Consolidated Fund Account to the Public Works Fund. The next table shows the expenditure at intervals of five years from 1884–85 to 1904–5 and for each of the last eleven financial years upon services which are charged to the fund. As will be seen further on, the whole of what may be termed public works are not included in this account.

Expenditure on Services provided for by the Public Works Fund.

Year ended 31st March.	Immigration.	Railways.	Roads.	Development of Mining.	Telegraph Extension.	Public Buildings.	Lighthouses, &c.	Other Services.	Totals.
	£	£	£	£	£	£	£	£	£
1885 ...	57,145	663,063	317,043	8,029	25,799	117,361	34,033	114,251	1,336,727
1890 ...	867	289,572	84,126	284	16,346	35,473	9,434	46,362	482,464
1895 ...	101	247,545	164,833	5,865	19,229	54,190	3,145	9,578	504,486
1900 ...	385	417,937	285,532	21,815	26,771	115,427	9,026	116,330	993,223
1905 ...	6,482	811,994	230,012	6,258	79,298	116,678	5,990	97,446	1,354,158
1910 ...	17,002	1,279,807	367,230	18,598	123,422	276,949	16,683	116,706	2,216,397
1911 ...	9,441	1,184,083	270,648	10,845	111,868	325,613	8,427	137,766	2,058,691
1912 ...	11,681	1,178,969	430,647	21,245	147,692	349,655	12,576	187,915	2,340,380
1913 ...	14,694	1,179,554	376,078	10,644	251,375	445,142	16,785	254,646	2,548,918
1914 ...	33,914	1,144,756	382,097	4,889	392,648	369,600	9,059	423,835	2,760,798
1915 ...	33,219	1,156,079	514,798	2,384	288,395	417,000	17,131	308,364	2,737,364
1916 ...	10,010	1,205,237	424,637	6,602	249,554	335,774	13,673	337,675	2,583,212
1917 ...	6,533	846,983	219,794	4,592	203,311	251,431	3,768	239,101	1,775,513
1918 ...	3,856	607,931	135,642	27	213,955	229,288	2,976	208,162	1,401,837
1919 ...	*Cr.* 12,018	467,737	226,073	518	198,611	235,846	5,392	265,502	1,387,661
1920 ...	*Cr.* 62,561	842,082	388,562	1,173	749,379	469,195	3,498	341,486	2,242,815

The receipts and expenditure of the fund during the financial year ended 31st March, 1920, were as under :—

PUBLIC WORKS FUND.—RECEIPTS AND EXPENDITURE, 1919–20.

	£	£
Receipts—		
Balance, 31st March, 1919	..	239,489
Debentures issued under the Finance Act, 1918 (No. 2)	1,940,000	
Debentures issued under the Railways Improvement Authorization Act, 1914	112,000	
Debentures issued under the Waihou and Ohinemuri Rivers Improvement Act, 1910	30,000	
		2,082,000
Recoveries on account of expenditure of previous years	112,864	
Receipts under the Waihou and Ohinemuri Rivers Improvement Act, 1910	2,716	
Receipts in connection with the Ellesmere and Forsyth Reclamation and Akaroa Railway Trust Account	1,592	
Receipts under State Supply of Electrical Energy Act, 1917	44,217	
		161,389
Total	..	£2,482,878
Expenditure—		
Railways	842,082	
Roads	388,562	
Public buildings	469,195	
Telegraph extension	249,379	
Contingent defence	10,187	
Immigration	*Cr.* 62,561	
Development of mining	1,173	
Lighthouses, harbour-works, and harbour-defences	3,498	
Tourist and health resorts	6,194	
Lands improvement	2,964	
Development of water-power	79,401	
Irrigation and water-supply	34,115	
Waihou and Ohinemuri Rivers improvement ..	39,266	
Plant, material, and stores	47,682	
Departmental	121,435	
Services not provided for	243	
		2,232,815
Balance, 31st March, 1920	..	250,063
Total	..	£2,482,878

The expenditure on roads out of the Public Works Fund does not comprise all of the moneys spent under that head by the General Government. Between 1896–97 and 1910–11 the sum of £469,236 was expended on construction of roads to open up Crown lands out of the moneys raised for loans to local bodies, and further sums have been spent from time to time for this purpose and for the opening-up of national-endowment lands out of the Land for Settlements and National Endowment Accounts respectively.

The roading of lands purchased for closer settlement is made a charge upon the Land for Settlements Account, and is included in the value upon which the rentals of those lands are based. The reclamation by drainage and opening up by means of roads of an area of the Hauraki Plains is provided for out of moneys borrowed for that purpose and shown in a separate account.

SEPARATE ACCOUNTS OR FUNDS.

The accounts included under this heading in some cases comprise revenue of different kinds mixed up with loan-money, while others are merely records of transactions which of their nature cannot be considered as properly belonging to the Public Account. Among the former may be counted the State Forests and State Coal-mines Accounts, and among the latter the accounts of local bodies, which consist of revenue collected on behalf of and paid over to local authorities, and the Deposit Accounts, consisting partly of moneys held in trust and partly of moneys held in suspense for various reasons.

Account.	Receipts		Expenditure.
	From Loan.	From other Sources.	
	£	£	£
Land for Settlements (opening up Crown lands for settlement)	..	81,203	69,673
Waimarino Bush-fire Relief ..	..	21,634	21,092
State Forests	65,000	8,514	70,396
State Coal-mines	..	236,176	293,442
Scenery Preservation	5,000	264	753
Local Bodies	..	51,442	53,559
Deposit	..	38,283,770	38,141,263
Cheviot Estate	..	23,335	8,866
Native Land Settlements	325,000	79,521	470,230
Conversion	..	..	330
War Expenses	11,632,735	832,345	15,911,177
Land for Settlements	560,000	779,128	1,383,834
Hauraki Plains	40,000	26,589	74,806
National Endowment	..	109,378	121,770
Workers' Dwellings	..	14,649	22,467
Mining Advances	..	..	1,098
Rangitaiki Land Drainage	105,000	6,340	64,965
Bank of New Zealand Acts 1903 and 1913	..	875,000	875,000
Reserve Fund	..	800,000	800,000
New Zealand Consols	..	475,992	475,992
Kauri-gum Industry	6,000	44,503	37,569
Swamp Land Drainage	27,000	..	31,541
Fruit-preserving Industry Advances ..	13,410	4,641	21,750
Discharged Soldiers Settlement ..	8,445,000	1,011,037	8,700,580
Cold-storage Advances	17,500	21,692	28,642
Land for Settlements (Discharged Soldiers Settlement)	1,775,000	..	1,456,404

STATEMENT OF BALANCES ON 31ST MARCH, 1920.

The cash balances and investments of the foregoing accounts as on 31st March, 1920, are shown in the following table:—

Account.	Cash.	Investments.	Total.
Cr.	£	£	£
Consolidated Fund (ordinary revenue) ..	2,358,726	15,180,250	17,538,976
State Forests	5,517	..	5,517
State Coal-mines	18,090	45,000	63,090
Scenery Preservation	4,944	..	4,944
Local Bodies	8,741	..	8,741
Deposit Accounts	1,688,422	1,521,195	3,209,617
Public Works Fund (proper)	219,502	..	219,502
Railways Improvement Authorization Act, 1914	22,794	..	22,794
Waihou and Ohinemuri Rivers Improvement	6,263	..	6,263
Electric Supply	1,504	..	1,504
Cheviot Estate	6,552	140,260	146,812
Land for Settlements	156,668	..	156,668
Land for Settlements (opening up Crown lands for settlement)	22,377	..	22,377
Native Land Settlement	22,869	..	22,869
Conversion Account	6,905	..	6,905
War Expenses	1,308,510	3,225,218	4,533,728
Hauraki Plains Settlement	2,333	..	2,333
National Endowment	100,448	..	100,448
Workers' Dwellings	..	77,100	77,100
Mining Advances	4,178	..	4,178
Rangitaiki Land Drainage	50,754	..	50,754
Bank of New Zealand (preference shares) ..	..	875,000	875,000
Reserve Fund	..	800,000	800,000
New Zealand Consols	7	475,985	475,992
Kauri-gum Industry	16,322	..	16,322
Swamp Drainage	1,723	..	1,723
Fruit-preserving Industry Advances ..	384	..	384
Cold-storage Advances	10,550	..	10,550
Discharged Soldiers Settlement	975,254	..	975,254
Waimarino Bush-fire Relief	5,892	17,700	23,592
Land for Settlements (Discharged Soldiers Settlement)	318,596	..	318,596
Totals	7,344,825	22,357,708	29,702,533

The State Advances Account, which is administered directly by the Advances Board, is not included in the above statement, nor is the Loans Redemption Account. In addition there are the funds of the Government Life Insurance Department, the State Fire Insurance Department, and the Public Trust Office, which are administered by the Departments concerned. Reference to the working of these Departments will be found elsewhere in this book.

SECTION XXVII.—PUBLIC FINANCE—*continued.*

SUBSECTION B.—TAXATION.

TOTAL TAXATION.

ALL revenue collected by means of taxation is applied to general purposes. Customs duties on imported goods, excise duties on beer and also on a few minor items, constitute the indirect taxation, land and income taxes, death duties, a tax on bank-note issues, duty on cheques and receipts for payments being the main source of revenue by direct taxation. Particulars of the collections during the past ten years, under the main headings, are shown in the following table:—

Year ended 31st March.	Amount of Taxation derived from					Total.
	Customs and Excise Duties.	Land-tax.	Income-tax.	Death Duties.	Other Taxes.	
	£	£	£	£	£	£
1911 ..	3,145,929	628,723	407,235	323,783	331,652	4,837,322
1912 ..	3,398,143	647,015	448,935	361,186	441,311	5,296,590
1913 ..	3,531,761	728,636	462,994	458,265	425,173	5,606,829
1914 ..	3,553,785	767,451	554,271	613,751	428,776	5,918,034
1915 ..	3,294,943	799,641	540,318	796,232	449,677	5,880,811
1916 ..	3,524,063	1,048,356	1,392,119	610,350	692,078	7,266,966
1917 ..	4,037,628	713,118	4,262,126	570,040	966,742	10,549,654
1918 ..	3,601,383	1,385,708	5,619,561	805,511	928,690	12,340,853
1919 ..	4,104,016	1,512,693	6,219,336	869,371	1,096,227	13,801,643
1920 ..	5,185,728	1,557,903	6,369,765	978,095	2,160,278	16,251,769

The percentage under each heading to the total amount collected for each year is as under:—

Year ended 31st March.	Proportion per Cent. derived from				
	Customs and Excise Duties.	Land-tax.	Income-tax.	Death Duties.	Other Direct Taxes.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1911 ..	65·03	13·00	8·42	6·69	6·86
1912 ..	64·16	12·21	8·48	6·82	8·33
1913 ..	62·99	13·00	8·26	8·17	7·58
1914 ..	60·05	12·97	9·37	10·37	7·24
1915 ..	56·03	13·60	9·19	13·54	7·64
1916 ..	48·49	14·43	19·16	8·40	9·52
1917 ..	38·27	6·76	40·40	5·40	9·17
1918 ..	29·18	11·23	45·54	6·53	7·52
1919 ..	29·74	10·96	45·06	6·30	7·94
1920 ..	31·91	9·59	39·19	6·02	13·29

Some remarkable alterations in percentages are noticed during the last few years, due to war taxation.

Taxation per Head.

The revenue from taxation per head of mean population during the past ten years is shown in the next table:—

Year ended 31st March.	Including Maoris.	Excluding Maoris.	Year ended 31st March.	Including Maoris.	Excluding Maoris.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1911 ..	4 12 4	4 16 11	1916 ..	6 6 4	6 12 1
1912 ..	4 19 0	5 3 10	1917 ..	9 3 7	9 11 11
1913 ..	5 2 3	5 7 2	1918 ..	10 14 1	11 3 9
1914 ..	5 5 2	5 10 0	1919 ..	11 17 1	12 7 8
1915 ..	5 2 9	5 7 5	1920 ..	13 11 1	14 2 9

Customs and Excise Taxation.

During the year ended 31st March, 1920, the sum of £4,787,483 was collected, after deduction of drawbacks, for duty on imported goods, and £397,905 for excise duties, a total of £5,185,388. The amount of revenue derived from these sources for each of the past ten years is shown below.

Year ended 31st March.	Customs Duties.	Excise Duties.	Total.
	£	£	£
1911	3,027,829	118,100	3,145,929
1912	3,279,012	119,131	3,398,143
1913	3,407,538	124,223	3,531,761
1914	3,426,744	127,041	3,553,785
1915	3,167,283	127,660	3,294,943
1916	3,366,171	157,892	3,524,063
1917	3,849,675	187,953	4,037,628
1918	3,364,308	237,075	3,601,383
1919	3,830,682	273,334	4,104,016
1920	4,787,483	397,905	5,185,388

The revenue from Customs and excise duties in 1909–10 was £2,786,490, and the increase for the ten years is therefore close on 90 per cent. In the ten calendar years corresponding to the same period the value of imports (excluding specie) increased from £14,817,462 to £30,308,908, or well over 100 per cent. Generally speaking, in spite of slight increases in Customs and excise duties referred to above as part of the war taxation, the average rate of duty has not increased greatly during the ten years. The increase in the total duties collected is thus almost entirely due to the increased prosperity of the country as reflected by its trade.

For a fuller discussion of Customs taxation than can be given here the reader is referred to the section of this book dealing with Commerce.

Land and Income Tax.

Except in regard to minor details, the system of land and income taxation in force in 1915 had remained unaltered for many years. Probably the only noteworthy point was the gradual hardening-up of the graduated land-tax, designed to prevent aggregation of land and to compel the cutting-up of large estates rather than to secure additional revenue.

The war taxation of 1915, however, not only included increased rates of 33⅓ per cent. in the case of income-tax, ¼d. in the pound in the case of land-tax payable on mortgages, and 50 per cent. in the case of graduated land-tax, but also involved an important change of principle. Among the incomes formerly exempt from income-tax are those derived directly from land, but income-tax is now payable on such incomes, including those derived from mortgages of land. In the case of mortgages, however, the income-tax is reduced by such amount as has been paid for land-tax, provided such amount does not exceed the total amount of income-tax.

With the exception of the abolition of the land-tax on mortgages and the substitution of an income-tax in its place, the principles of land-tax assessment were not altered in 1916, nor were the rates increased, but an entirely new scheme, the excess-profits tax, was brought into operation in respect of income-tax, the 1915 system remaining also, with increased rates, for ordinary income-tax.

The excess-profits tax being found inequitable and otherwise unsatisfactory, a system of progressive land and income tax, with a special war tax on incomes, was adopted in 1917, and has been continued since.

Land-tax is assessed on the unimproved value of the land after allowing certain exemptions as set out below. As the law now stands an owner of land the unimproved value of which does not exceed £1,500 is allowed an exemption of £500, and where the unimproved value lies between £1,500 and £2,500 there is a similar exemption, diminished, however, by £1 for every £2 over the £1,500 mark, so that no exemption is allowable when the £2,500 is reached. Where the land is subject to a registered mortgage an alternate scale of deductions is provided—viz., £1,500 in cases where the unimproved value does not exceed £3,000, and the same amount diminished by £1 for every £2 above £3,000 when the unimproved value lies between £3,000 and £6,000. Where the capital value of the mortgage is less than the amount of deduction provided, such capital value is to be deducted instead. In lieu of the exemptions mentioned, the Commissioner of Taxes has discretionary powers to grant relief in certain specified cases of hardship. Subject to deductions provided, lessees and life tenants are liable to tax, and joint owners are to be assessed jointly as regards the land held in conjunction, and also severally in respect of each owner's interest in such land and any other land. This also applies to the shareholders in a company owning land.

The progressive land-tax, now substituted for the former double system of ordinary and graduated tax, ranges from 1d. to 7d. in the pound. The 1d. rate applies in cases where the unimproved value on which tax is payable does not exceed £1,000, and the rate is increased by $\frac{1}{240}$ of a penny for every pound in excess of £1,000, up to the maximum of 7d. These rates were virtually increased for the year 1917–18 and later years by the imposition of a super-tax of 50 per cent., the minimum rate for the year being thus 1½d. and the maximum 10½d. A further 50-per-cent. increase on the total rates is imposed in the case of absentees,

including shareholders in companies, but not in the case of the companies themselves.

Income-tax is payable on the full incomes of registered companies and of absentees, and in other cases on incomes in excess of £300 per annum. Formerly a deduction of £300 was made from the income in all cases (except for companies and absentees) when computing the amount of tax payable, but the full deduction is now made only when the income does not exceed £600. Between £600 and £900 the exemption is reduced by £1 for every £1 above £600, and no exemption at all is allowed for incomes above £900. Certain specified incomes are wholly exempt from taxation, and a further £25 is deductible from assessable income for each child under sixteen years of age. Sundry other deductions are also provided.

The rates of progressive income-tax since 1917–18 have ranged from 6d. to 3s. in the case of persons and firms, and from 1s. to 3s. for companies. The 6d. rate for persons and firms applies where the taxable income is not more than £400, and the 1s. rate for companies where the taxable income does not exceed £1,600, the rates being increased by $\frac{1}{200}$ part of a penny for every additional pound until the maximum tax of 3s. in the pound is reached. Income derived by holders of company debentures from such debentures bears a uniform tax of 1s., plus a special war tax of 1s. 6d.

The special war tax also applies to assessable income in excess of £300 of all other income-tax payers. For incomes up to £400 the rate of special war tax is 9d. in the pound, and this is increased by $\frac{3}{400}$ of a penny for every additional pound of income, but so as not to exceed 4s. 6d. in the pound. The maximum total rate of income-tax is thus 7s. 6d. in the pound.

A new feature of the land- and income-taxation laws of the Dominion was the provision in the Finance Act, 1917, for an additional penal tax in cases where the taxpayer had not contributed to the war loan in proportion to his income. The Act made it the duty of every taxpayer whose taxable income for the year ended 31st March, 1916, exceeded £700 to subscribe to the war loan of 1917–18, on notice being served by the Commissioner of Taxes, an amount equal to three times the amount of land and income tax payable for the year 1916–17. This provision was renewed for the following year by the Finance Act (No. 2) of 1918.

The income-tax for the year ended the 31st March, 1920, amounted to £6,369,765 and the land-tax to £1,557,903. The number of income-tax payers was 44,084, as against 30,230 just three years before. Land-tax payers numbered 53,807, as against 35,859 in 1917.

The total number of land- and income-tax payers for each of the past ten years was,—

NUMBER OF TAXPAYERS.

Year ended 31st March.	Land-tax.	Income-tax.	Year ended 31st March.	Land-tax.	Income-tax.
1911 ..	33,516	11,303	1916 ..	45,409	20,072
1912 ..	35,273	12,207	1917 ..	35,859	30,230
1913 ..	38,232	13,167	1918 ..	51,275	37,949
1914 ..	40,889	14,277	1919 ..	53,484	43,280
1915 ..	44,270	13,967	1920 ..	53,807	44,084

The revenue derived from land-tax and income-tax during each of the past ten years is as shown below.

LAND AND INCOME TAX.

Year ended 31st March.	Land-tax.	Income-tax.	Year ended 31st March.	Land-tax.	Income-tax.
	£	£		£	£
1911 ..	628,723	407,235	1916 ..	1,048,356	1,392,119
1912 ..	647,015	448,935	1917 ..	713,118	4,262,125
1913 ..	728,636	462,994	1918 ..	1,385,708	5,619,561
1914 ..	767,451	554,271	1919 ..	1,512,693	6,219,336
1915 ..	799,641	540,318	1920 ..	1,557,903	6,369,765

In 1917 the dual system of land-taxation (ordinary and graduated) was superseded by a single graduated tax, which in 1919–20 yielded the sum of £1,557,903.

The fall in the amount of land-tax in 1916–17 was due to the alteration in system referred to above, whereby income derived from mortgages of land now bears income-tax instead of land-tax as formerly.

DEATH DUTIES.

ESTATE DUTY.

Under the Death Duties Act, 1909, an estate duty is levied upon the final balance of all property of a deceased person which is situated in New Zealand at his death in excess of the value of £500. In the case of any estate the final balance of which does not exceed £10,000, any interest acquired by the wife of the deceased up to the value of £5,000 is exempt from estate duty, but the rate of duty on the whole estate must be determined before the deduction is made.

The scale of duties ranges from 1 per cent. in cases where the net estate is between £500 and £1,000 to a maximum of 15 per cent. for large estates.

SUCCESSION DUTY.

Succession duty is payable by any person who acquires a beneficial interest in the estate of a deceased person either by will or by intestacy, according to the following scale: Wife, husband, child, or other descendant of deceased, 2 per cent.: relatives up to fourth degree, 5 per cent.; all others, 10 per cent. Exemptions are allowed to a maximum of £20,000 for a wife of deceased, £5,000 for a child or grandchild of deceased, and £200 in other cases. The wife, lineal descendant, or lineal ancestor of a soldier who has met his death on account of the war is allowed an additional £5,000 exemption.

GIFT DUTY.

A gift means any disposition of property which is made otherwise than by will, whether with or without an instrument in writing, without

fully adequate consideration in money or its equivalent. The duty payable is as follows:—

(1.) On a gift which together with the value of all other gifts made at the same time, or within twelve months previously or subsequently by the same donor to the same or any other beneficiary, otherwise than by way of a charitable trust, does not exceed the value of £1,000, no duty shall be charged.

(2.) On gifts exceeding the value of £1,000, 5 per cent. Antenuptial marriage settlements and charitable gifts are exempt from duty.

Revenue from Death Duties.

Death duties are due and payable to the Commissioner of Stamps within six months from the death of the deceased, and gift duties at the time the gift is made.

The revenue received from death duties during each of the past ten years was:—

Year ended 31st March.	Amount. £	Year ended 31st March.	Amount. £
1911	323,783	1916	610,350
1912	361,186	1917	570,040
1913	458,265	1918	805,511
1914	613,751	1919	869,371
1915	796,232	1920	978,095

Totalizator-tax.

The Government tax on totalizator investments is 2½ per cent. of the gross amount passed through the machines.

A tax of 1 per cent. has from the 1st November, 1915, been imposed on the total value of all stakes, and 6d. in the pound or part of a pound on totalizator dividends, in addition to the tax on totalizator investments.

Financial Year.	Number of Totalizator Licenses issued for Meetings held during Financial Year.	Days.	Percentage paid to Treasury.	Total Amount invested by the Public.
			£	£
1910–11	144	287	48,338	1,933,534
1911–12	142	264	72,184	2,887,371
1912–13	148	265	86,095	3,600,465
1913–14	126	231	92,260	3,690,390
1914–15	141	255	110,733	4,429,320
1915–16	180	285	119,379	4,775,120
1916–17	171	279	127,387	5,095,480
1917–18	135	205	110,845	4,433,816
1918–19	134	201	122,154	4,886,156
1919–20	183	302	209,345	8,373,787

In addition to the amount shown above as percentage paid to the Treasury in 1919–20, the sum of £197,730 was received as dividend duty and £5,060 as tax on stakes.

The racing year ends on the 31st July, and the position as regards the last five years is perhaps better shown in the next table, which gives figures for July years.

Racing Year.	Number of Totalizator Licenses issued.	Days.	Amount invested on Totalizator by the Public.	Amount of Gate-money, Licenses, &c.	Amounts paid to Treasury.*	
					As Tax on Investments.	From Gate-money, Licenses, &c.
			£	£	£	£
1915–16	175	281	4,796,515	133,700	119,913	3,343
1916–17	163	280	5,040,594	128,868	126,015	3,222
1917–18	131	189	4,421,175	108,444	110,529	2,711
1918–19	152	239	5,721,649	137,572	143,041	3,439
1919–20	175	291	8,788,788	220,894	219,720	5,522

* Not including dividend duty or tax on stakes.

Local Taxation.

Local governing authorities have power under various Acts of the Legislature to impose taxes for general or special purposes as set out in another section of this book. The amount of revenue collected for local purposes during the last ten years is shown in the section dealing with local authorities.

SECTION XXVII.—PUBLIC FINANCE—*continued.*

SUBSECTION C.—PUBLIC DEBT.

INDEBTEDNESS—GROSS, NET, AND PER HEAD.

THE gross and net indebtedness of the General Government, the amount of sinking fund accrued, and the rate of indebtedness per head of population, for each of the past ten years, is given in the following table:—

As at 31st March.	Estimated or Census Population.	Amount of Debentures and Stock in Circulation.	Gross Indebtedness per Head of European Population.			Amount of Sinking Fund accrued.	Net Indebtedness.	Net Indebtedness per Head of European Population.		
		£	£	s.	d.	£	£	£	s.	d.
1911	1,008,468	81,078,122	80	7	11	1,754,486	79,323,636	78	13	2
1912	1,031,500	84,353,913	81	15	7	2,160,603	82,193,310	79	13	8
1913	1,061,748	90,060,763	84	16	5	2,603,642	87,457,121	82	7	5
1914	1,089,827	99,730,427	91	10	2	3,063,992	91,689,835	84	2	8
1915	1,100,586	100,059,910	90	18	4	3,178,055	96,644,455	87	16	3
1916	1,100,406	109,637,397	99	12	8	3,679,964	105,957,433	96	5	9
1917	1,101,166	129,836,105	117	18	2	4,263,590	125,572,515	114	0	9
1918	1,104,783	150,840,055	136	10	8	4,971,605	145,868,450	132	0	8
1919	1,124,630	176,076,260	156	11	4	5,951,056	170,125,204	151	5	6
1920	1,174,139	201,170,755	171	6	8	7,257,564	193,913,191	165	3	1

ALLOCATION OF PUBLIC DEBT EXPENDITURE.

The indebtedness as at 31st March, 1920, allocated to its various items in the four classes referred to, is shown in the following statement. In addition figures of the increase for the last financial year are given, as are also figures showing the increase since the 31st March, 1914.

ALLOCATION OF PUBLIC INDEBTEDNESS.

	Increase since 31st March, 1914.	Increase during 1919-20.	Total Indebtedness at 31st March, 1920.
(*a.*) Directly reproductive undertakings,—	£	£	£
Railways	4,579,215	784,495	33,000,519
Railways improvement ..		112,000	
Telegraphs and telephones ..	1,352,411	261,319	3,561,295
Lighthouses and harbours ..	40,913	3,565	653,884
Tourist and health resorts ..	20,909	6,491	189,904
State coal-mines	2,601	..	227,601
Water-power development and electric supply	243,371	..	462,291
Swamp drainage	73,000	27,000	73,000
Waihou and Ohinemuri Rivers improvement	30,000	30,000	130,000
Totals (class *a*) ..	6,342,420	1,224,970	38,298,494

ALLOCATION OF PUBLIC INDEBTEDNESS—*continued.*

	Increase since 31st March, 1914.	Increase during 1919-20.	Total Indebtedness at 31st March, 1920.
(*b.*) Investments,—	£	£	£
Advances to settlers ..	605,871	..	9,283,196
Advances to workers ..	117,580*	..	2,419,347
Advances to local authorities	207,461	..	2,775,528
Mining advances	11,500	..	26,500
Kauri-gum industry advances	53,000	6,000	53,000
Fruit-preserving industry advances	69,610	13,410	69,610
Cold-storage advances ..	120,750	17,500	120,750
Land for settlements ..	3,520,430	2,335,000	10,654,523
Discharged soldiers settlement	9,345,000	8,445,000	9,345,000
Native-land settlement ..	1,525,431	325,000	2,455,031
Opening up Crown lands ..	..	..	347,911
Hauraki Plains settlement ..	85,000	40,000	185,000
Rangitaiki drainage	205,000	105,000	250,000
Waimarino bush-fire relief ..	75,000	..	75,000
Purchase of Native lands ..	..	..	2,715,217
Loans to local bodies ..	..	..	3,507,000
Investment of New Zealand Consols	..	..	475,992
Bank of New Zealand shares..	375,000	..	875,000
Reserve Fund securities ..	..	..	800,000
Totals (class *b*) ..	16,081,473	11,286,910	46,433,605
(*c.*) Indirectly productive,—			
Roads and bridges	1,783,192	407,167	9,818,198
Lands improvement		3,106	
Irrigation and water-supply ..	59,672	35,748	
State forests..	130,000	65,000	130,000
Development of mining ..	13,479	1,229	910,471
Immigration	38,709*	65,557*	2,483,169
Totals (class *c*) ..	1,947,634	446,693	13,341,838
(*d.*) Unproductive,—			
Public buildings	1,721,334	491,661	8,164,890
Scenery-preservation ..	20,000	5,000	94,000
Maori War	400*	400*	2,356,600
Contingent defence	47,516	10,675	3,767,527
Naval defence		..	
Great European War ..	80,089,025	11,628,985	80,089,025
Deficiencies in revenue, charges and expenses of raising loans, provincial liabilities, &c. ..	167,926	..	8,624,776
Totals (class *d*) ..	82,045,401	12,135,921	103,096,818
Grand totals ..	£106,416,928	£25,094,494	£201,170,755

* Decrease.

In a consideration of the increase of public debt the end of the financial year 1890–91 is often regarded as a turning-point, since that date marks the beginning of the extension of State activities. The advent of the war created a second point of demarcation in the history of the loan expenditure of the General Government, necessitating as it did a postponement of all public works, &c., save works of pressing necessity.

The directly interest-earning portion of the debt amounts to 42 per cent. of the total debt, and is represented by assets which are of much greater value than the amount of borrowed money spent upon them, a considerable amount of surplus ordinary revenue having been expended from time to time on railways and other public services, as well as other moneys of the nature of special receipts. The small proportion represented by unproductive loan-money raised during the period prior to 1914 is in strong contrast to the similar proportion for the period 1914 to 1920.

Character of Stock.

The whole of the public debt as stated in the foregoing tables comprises inscribed stocks and debentures with varying periods of currency. The following table shows the relative increase of the different classes of securities during the past ten financial years:—

Year ended 31st March.	Inscribed Stock.	Debentures.	Total.
	£	£	£
1911	54,832,570	26,245,552	81,078,122
1912	55,626,235	28,727,678	84,353,913
1913	59,960,105	30,100,658	90,060,763
1914	66,076,250	33,654,177	99,730,427
1915	68,008,389	32,051,521	100,059,910
1916	68,689,630	40,947,767	109,637,397
1917	68,689,935	61,146,170	129,836,105
1918	77,760,485	73,079,570	150,840,055
1919	87,373,480	88,702,780	176,076,260
1920	95,095,914	106,074,841	201,170,755

Flotation of Loans.

Until comparatively recent years the large proportion of the productive power of the Dominion diverted to the construction of railways, roads, &c., and engaged in the preparation of land for farming, necessitated the borrowing of capital from abroad; but of late the accumulation of savings, chiefly of small sums deposited in the savings-banks, has enabled the Government to raise considerable amounts from time to time locally. This has been especially the case in connection with the war loans.

Between the 31st March, 1910, and the corresponding date in 1920 the amount raised (and remaining outstanding) in London increased from 57¾ to 95¾ millions, while that raised in New Zealand increased from 13 to 102 millions. The amount raised in Australia is negligible. The following table shows, of the

total amount outstanding in each of the past ten years, the amount raised in London, Australia, and New Zealand:—

PUBLIC DEBT, WHERE RAISED.

Year ended 31st March.	Inscribed Stock.		Debentures.			Total.
	London.	New Zealand.	London.	Australia.	New Zealand.	
	£	£	£	£	£	£
1911 ..	54,370,404	462,166	7,851,414	4,213,985	14,180,153	81,078,122
1912 ..	55,152,124	474,111	8,852,750	4,213,985	15,660,943	84,353,913
1913 ..	59,484,214	475,891	9,445,250	4,213,985	16,441,423	90,060,763
1914 ..	65,600,259	475,991	13,024,050	4,286,800	16,343,327	99,730,427
1915 ..	67,532,398	475,991	8,877,603	3,979,000	19,194,918	100,059,910
1916 ..	68,213,639	475,991	13,251,109	3,520,650	24,176,008	109,637,397
1917 ..	68,213,943	475,992	15,663,875	3,385,650	42,096,645	129,836,105
1918 ..	68,213,943	9,546,542	20,493,875	3,385,650	49,200,045	150,840,055
1919 ..	68,213,943	19,159,537	27,494,385	3,385,650	57,822,745	176,076,260
1920 ..	68,213,943	26,881,971	27,494,385	3,385,650	75,194,806	201,170,755

The percentage of the total debt raised in each of the markets and outstanding in 1909-10 and 1919-20 was,—

Market.	1909-10. Per Cent.	1919-20. Per Cent.
London	77·09	47·58
New Zealand	17·42	50·74
Australia	5·49	1·68
	100·00	100·00

DATES OF MATURITY OF LOANS.

A summary of the loans outstanding on the 31st March, 1920, showing the amounts falling due in each financial year is given.

Due Date: Year ending 31st March.	Amount. £	Due Date: Year ending 31st March.	Amount. £
1915	2,100*	1938	3,000
1918	1,000*	1939	26,429,975
1920	6,200*	1940	25,515,687
1921	10,130,457	1941	781,815
1922	6,361,890	1942	2,748,350
1923	8,862,156	1946	17,074,121
1924	9,546,365	1948	895,000
1925	17,841,497	1949	1,423,600
1926	618,810	1950	1,106,500
1927	56,400	1963	10,884,628
1928	2,573,560	Unspecified ..	22,208,932
1930	30,550,992		
1931	5,528,990	Total	£201,170,755
1936	17,730		
1937	1,000		

* Overdue.

The amounts that have matured or will mature during the current financial year, with their due dates, are as follows:—

Due Date.	£	Due Date.	£
1914, July 15 ..	2,100*	1920, October 1 ..	229,900
1918, January 1 ..	1,000*	1920, October 15 ..	800
1920, January 1 ..	1,000*	1920, November 1	268,000
1920, February 1 ..	5,200*	1920, December 15	1,095,360
1920, April 1 ..	283,400	1920, December 31	159,900
1920, April 15 ..	302,400	1921, January 1 ..	2,047,600
1920, May 1 ..	1,303,976	1921, February 1 ..	2,028,620
1920, June 1 ..	130,000	1921, March 1 ..	1,048,000
1920, June 5 ..	80,000	1921, March 3 ..	25,000
1920, June 30 ..	190,000	1921, March 30 ..	19,100
1920, July 1 ..	200,000	1921, March 31 ..	10,000
1920, July 31 ..	15,000		
1920, August 1 ..	274,401	Total	£10,139,751
1920, September 1	19,000		
1920, September 30	400,000		

* Overdue.

INTEREST.

Of the total amount of public debt outstanding at the end of March, 1920, over twenty-four millions bore interest at the rate of 5 per cent., over sixty millions at 4½ per cent., and nearly eighty-four millions at 4 per cent. Only £33,175,988, or 16·49 per cent. of the total, bore interest at a lower rate than 4 per cent., as against 48·39 per cent. of the total at *31st March, 1914*. The following are the rates of interest payable on the whole public debt:—

Rates of Interest.	Amount at each Rate. £	Rates of Interest.	Amount at each Rate. £
5 per cent. ..	24,084,661	3½ per cent. ..	22,436,498
4½ per cent. ..	60,219,516	3 per cent. ..	9,662,790
4¼ per cent. ..	55,100	Overdue	9,300
4 per cent. ..	83,626,190		
3¾ per cent. ..	1,076,700	Total	£201,170,755

The total amount of interest payable to bondholders on the full amount of the public debt (excluding interest on £9,300 shown as overdue) is £8,377,037, which gives an average rate of £4 3s. 3d. per £100. On the total public debt outstanding on the 31st March, 1891, the average interest charge was £4 10s. 3d. per £100. During the period 1890–91 to 1919–20, therefore, the average rate is found to have declined by 7s. per £100. There was, however, an increase of 6s. 10d. per £100 in 1919–20 as compared with 1913–14.

The foregoing refers to interest payable to bondholders only, and has nothing to do with sinking-fund requirements, which are included in the whole annual charge of the public debt.

The actual payments during the past ten years for interest and sinking fund out of the Consolidated Fund are shown in the following table, together with the rate per head of population and the percentage of ordinary and territorial revenue absorbed by the public-debt charges:—

Year ended 31st March.	Amounts actually paid for Interest and Sinking Fund out of the Consolidated Fund.					Rate per Head of Mean Population.	Percentage of Revenue absorbed by Public-debt Charges.
	Public Debt.			Treasury Bills.	Total.		
	Interest.	Sinking Fund.	Total.	Interest.			
	£	£	£	£	£	£ s. d.	
1911 ..	2,381,000	54,104	2,435,104	23,348	2,458,452	2 9 3	23·87
1912 ..	2,446,493	198,388	2,644,881	11,459	2,656,340	2 12 1	24·02
1913 ..	2,506,025	202,757	2,708,782	8,231	2,717,013	2 11 11	23·15
1914 ..	2,649,796	221,726	2,871,512	16,468	2,887,980	2 13 8	23·61
1915 ..	2,788,513	247,570	3,036,083	35,365	3,071,448	2 16 1	24·67
1916 ..	2,888,533	257,036	3,145,569	45,229	3,190,798	2 18 0	21·99
1917 ..	3,701,040	326,924	4,027,964	4,921	4,032,885	3 13 4	21·97
1918 ..	3,935,118	494,699	4,429,817	962	4,430,779	4 0 4	21·93
1919 ..	5,409,210	677,559	6,086,769	..	6,086,769	5 9 2	27·23
1920 ..	6,352,943	896,483	7,249,426	..	7,249,426	6 3 6	27·80

The above amounts shown as interest and sinking fund do not comprise the whole of the interest and sinking fund paid in respect of moneys raised by way of loans. For loans raised for the purposes of State advances to settlers, workers, local authorities, &c., and under the Land for Settlements Acts, the interest, although made a charge upon the Consolidated Fund, is recovered from the receipts derived from the leasing of the lands or from instalments paid by borrowers. Other loan-money coming within the same category is that raised for State coal-mines, Native-land settlement, the purchase of the Cheviot Estate, the Rangitaiki land drainage, the Hauraki Plains settlement, the Waihou and Ohinemuri Rivers improvement, and a number of other purposes.

The amount of interest charged and recovered during last year in respect of the loan-money raised for such purposes was £1,068,759. The details are as follow :—

	£
Land for settlements (including opening up Crown lands for settlement)	341,210
Discharged soldiers settlement	30,000
Cold-storage Advances Act	4,942
Advances to settlers	345,239
Advances to workers	95,854
Advances to local authorities	103,196
Mining advances	1,097
State coal-mines	8,933
Kauri-gum industry	1,987
Native-land settlement	82,164
Cheviot Estate	8,866
Waihou and Ohinemuri Rivers improvement ..	4,460
Hauraki Plains settlement	5,946
State forests	3,577
Electric supply	20,431
Fruit-preserving Industry Advances Account ..	1,500
Waimarino Bush-fire Relief Account	3,008
Rangitaiki Land Drainage Account	6,349
Total	£1,068,759

Such interest does not become a burden upon the taxpayer, and consequently is not included in the figures upon which the rate per head of mean population is calculated.

The amount actually paid for interest and sinking fund out of the Consolidated Fund during 1919–20 was £1,162,657 more than that for the previous year, and the rate of charge per head of population shows an increase of 14s. 4d.

Sinking Funds.

The whole of the public debt for which no special sinking fund exists has now been provided for by the Public Debt Extinction Act, 1910, referred to in detail below.

On the 31st March, 1920, the accrued sinking funds amounted to £7,257,564, made up as follows:—

	£
New Zealand Loan Act, 1863	2,207
Government loans to local bodies	799,601
War and defence loans	192,691
War loans (1914–18)	1,603,880
Naval Defence Act, 1909	715,221
State-advances loans	1,410,261
Land for settlements	873,257
Native-land settlement	11,977
Guaranteed mining advances	722
Hauraki Plains settlement	..
Opening up Crown lands for settlement	..
Rangitaiki land drainage	..
Public Debt Extinction Act, 1910	1,647,747
	£7,257,564

Public Debt Extinction.

The contributions to the fund to the 31st March, 1920, amounted to £1,386,790, interest, &c., bringing the amount to the credit of the fund to £1,647,747. The payments to the fund in each of the nine years which have elapsed since the coming into operation of the Act have been,—

Year ended 31st March,	£
1912	144,885
1913	149,343
1914	151,572
1915	169,404
1916	161,870
1917	171,301
1918	155,038
1919	143,301
1920	140,076

The amount required to be set aside during the financial year 1920–21 is £152,295.

The decrease in the amount set aside in 1915–16, as compared with 1914–15, is due to the fact that in terms of section 10 of the Act the interest used in the calculation for 1915–16 was taken as the actual average net rate of interest earned during the preceding three years (£4 4s. 3d. per cent.), as against 4 per cent. in previous years. The decreases in the amount set aside since 1916–17, as compared with the amount set aside during that financial year, have resulted from the increasing rates of interest ruling. The average net rate for the three years ended the 31st March, 1920, has been ascertained to be £4 16s. 6d., as against £4 14s. 3d. per cent. for the triennium ending with the preceding year. The former rate was used in the computation of the amount due to be set aside in 1920–21.

The sum of £138,287 was at the 31st March, 1920, invested in mortgages to settlers, and £812,617 to local authorities. The former amount bears interest at 5 per cent., reducible to 4½ per cent. if instalments are paid within fourteen days of due date. Of the amount advanced to local authorities, part bears interest at 4⅛ per cent., and the balance at 4½ per cent.

Prices of New Zealand Stock.

The highest and lowest London prices for the New Zealand 4-, 3½-, and 3-per-cent. stock, taken over a range of twenty years, are quoted.

Quotations, New Zealand Stock.

	4-per-cents. (1943–63.)		4-per-cents. (1929.)		3½-per-cents. (1940.)		3-per-cents. (1945.)	
Year.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.	Highest.	Lowest.
1900 ..	..	..	113¼	109	106⅜	103⅜	98½	95¼
1901 ..	..	..	115⅜	110⅜	109¾	104⅛	99½	93⅛
1902 ..	..	..	113¼	109	109½	102⅛	97	93⅜
1903 ..	..	..	110⅛	105	104⅜	99½	96	88
1904 ..	..	..	107½	104½	101½	96¾	90	86¼
1905 ..	..	..	110¼	105¼	100⅛	97⅝	89⅞	89½
1906 ..	..	..	110¾	104⅝	102½	98⅜	91¼	87¼
1907 ..	..	..	108¾	103¼	101	98	89¾	84
1908 ..	..	..	109⅝	105⅛	101	98¼	90½	85¾
1909 ..	..	..	108⅜	104¾	99¾	97⅜	88⅜	85⅝
1910 ..	..	..	106¾	103	99	94¼	88⅜	84¾
1911 ..	..	..	106¾	102⅛	98½	95¼	87⅜	85
1912 ..	..	..	105	100	97¾	90⅜	87¾	79½
1913 ..	101	96⅜	102½	95½	91⅞	87¾	80¾	76¼
1914 ..	100⅜	96¼	103⅛	98	92¾	87	83½	77
1915 ..	97½	95	99⅛	95	87½	83¼	77¾	76
1916 ..	95⅛	77	95	83¾	83⅜	69	76	62
1917 ..	82⅝	76	86½	81¼	74½	69	64⅜	60
1918 ..	85½	78¼	90⅞	84	79	71¾	68¾	61¾
1919 ..	86	77⅛	90	83	79	68¼	69½	60

PUBLIC DEBT OF AUSTRALASIA.

The following figures show the gross and net public debt of each State of the Australian Commonwealth, and of the Commonwealth itself, on the 30th June, 1919, and of New Zealand on the 31st March, 1919:—

State.	Gross Indebtedness.	Accrued Sinking Funds.	Net Indebtedness.	Indebtedness per Head.					
				Gross.			Net.		
	£	£	£	£	s.	d.	£	s.	d.
New South Wales	147,174,536	388,259	146,786,277	74	19	6	74	15	3
Victoria	82,031,929	2,600,778	79,431,151	55	18	3	54	2	9
Queensland ..	65,581,121	385,540	65,195,581	92	0	3	91	9	2
South Australia ..	42,650,206	1,509,930	41,140,276	93	10	10	90	4	7
Western Australia	43,637,076	6,139,008	37,498,068	135	0	0	116	0	10
Tasmania ..	15,281,281	646,197	14,635,084	72	9	3	69	8	0
Total, Australian States	396,356,149	11,669,712	384,686,437	77	2	1	74	16	8
Commonwealth ...	†309,033,566	*	*	60	2	4		*	
Total Commonwealth and States	705,389,715	*	*	137	4	5		*	
New Zealand ..	**176,076,260**	**5,951,054**	**170,125,206**	**156**	**11**	**4**	**151**	**5**	**6**

* Information not available. † Excluding £16,750,000 borrowed by the Commonwealth on behalf of the States.

New Zealand has now a greater *per capita* debt than any of the Australian States, although, if the Commonwealth debt be added to that for each State, an exception to this statement will be found in the case of Western Australia. The gross indebtedness of the Dominion is rather more than £5 per head greater than that of Australia, but if full information as to the net indebtedness of the Commonwealth were available it would probably be found that the net debt per head in New Zealand approximates a little more closely to that of Australia than is indicated by the figures of gross indebtedness.

SECTION XXVIII.—PRICES.

THE investigation of price-changes was undertaken by the Statistical Office of New Zealand early in 1914. Retail prices were collected and tabulated for each year since 1891, and the results of the inquiry, together with a full discussion of the method adopted, were published in the "Report on the Cost of Living in New Zealand, 1891–1914." Since that date price quotations and index numbers have been continued—first in the *Journal of the Department of Labour*, and latterly in the *Monthly Abstract of Statistics*.

In 1920 the Census and Statistics Office issued its second report, "Prices.—An Inquiry into Prices in New Zealand, 1891–1919." The scope of this inquiry was wider than that of the previous one and covered retail, wholesale, producers', and export prices. Retail prices especially are given prominence in this volume, and by means of graphs and extensive tables of index numbers as well as actual prices price-movements during the period under review can easily be followed.

COST OF LIVING IN TWENTY-FIVE CENTRES IN 1919.

Retail price quotations, upon which index numbers are regularly calculated are collected each month in twenty-five towns of the Dominion, which were selected as being representative of New Zealand as a whole. These twenty-five towns are distributed over both Islands, from Whangarei in the North to Invercargill in the South, and represent coastal and inland districts and large and small centres. Returns of prices are collected by the local Inspector of Factories from representative retailers, and index numbers are computed in the Census and Statistics Office, Wellington. The average prices for each town are published in the *Monthly Abstract of Statistics* at the end of each quarter, while index-numbers appear in each month's issue.

The commodities considered are almost exclusively articles of food, divided into three groups—groceries, dairy-produce, and meat. Figures regarding house-rents and fuel and lighting are also given.

So far as the following tables are concerned, it is necessary to explain that in order that the index numbers for the smaller centres may be comparable with the index numbers given for the four chief centres for past years the same "base" has been retained throughout—viz., the "annual aggregate expenditure" in the four chief centres for the five years 1909–13.

The quarterly index numbers given below are based on the average prices of the three months in the quarter, so that they differ materially from the prices current at the end of the quarters. In comparing different quarters consideration must be given to the influence of seasonal fluctuations in price and consumption of some commodities, including such important articles as milk, butter, potatoes, eggs.

The tables are comparable both horizontally and vertically, since each column has the same base. Horizontally they show variations in time, vertically variations according to locality.

GROUP I.—GROCERIES.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers for each Quarter of 1919, and for the Average of the Four Quarters of 1919 and of 1918, for Twenty-five Representative Towns in New Zealand.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Town.	First Quarter, 1919.	Second Quarter, 1919.	Third Quarter, 1919.	Fourth Quarter, 1919.	Average of Four Quarters, 1919.	Average of Four Quarters, 1918.
Auckland ..	1486	1470	1554	1631	1535	1461
Wellington ..	1618	1564	1649	1745	1644	1579
Christchurch ..	1530	1426	1525	1640	1530	1417
Dunedin ..	1584	1478	1535	1644	1560	1503
Whangarei ..	1613	1634	1690	1726	1666	1552
Hamilton ..	1514	1514	1620	1722	1593	1496
Rotorua ..	1639	1607	1720	1804	1693	1574
Waihi ..	1492	1447	1566	1673	1545	1456
Gisborne ..	1641	1601	1720	1811	1693	1585
Napier ..	1584	1495	1565	1711	1589	1552
Dannevirke ..	1597	1562	1600	1687	1612	1475
New Plymouth ..	1516	1443	1513	1608	1520	1414
Wanganui ..	1462	1413	1528	1621	1506	1412
Taihape ..	1636	1634	1655	1793	1680	1577
Palmerston North	1506	1464	1529	1631	1533	1441
Masterton ..	1622	1584	1636	1750	1648	1548
Blenheim ..	1687	1654	1689	1808	1710	1530
Nelson ..	1566	1525	1557	1657	1576	1491
Greymouth ..	1584	1487	1523	1607	1550	1456
Ashburton ..	1638	1445	1497	1607	1547	1402
Timaru ..	1550	1434	1503	1562	1512	1457
Oamaru ..	1610	1475	1542	1640	1567	1491
Alexandra ..	1711	1614	1653	1716	1674	1617
Gore	1717	1551	1628	1722	1655	1503
Invercargill ..	1655	1521	1593	1663	1608	1529
Dominion weighted average	1554	1489	1570	1666	1570	1488

The weighted average index number for the Dominion shows an increase of 82 points in 1919 over the average for the previous year. The increase, to a varying extent, has been common to each of the twenty-five towns covered by the inquiry. Wellington maintains its position with considerably higher grocery-prices than prevail in the other three chief centres. It should be pointed out that movements as between succeeding quarters are by no means uniform. The effect of seasonal fluctuations in prices of such commodities as potatoes and onions renders it necessary that comparisons should be made either between corresponding quarters of the two years or between the average of the four quarters as given in the above table.

GROUP II.—DAIRY-PRODUCE.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers for each Quarter of 1919, and for the Average of the Four Quarters of 1919 and of 1918, for Twenty-five Representative Towns in New Zealand.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Town.	First Quarter, 1919.	Second Quarter, 1919.	Third Quarter, 1919.	Fourth Quarter, 1919.	Average of Four Quarters, 1919.	Average of Four Quarters, 1918.
Auckland ..	1447	1572	1520	1533	1518	1443
Wellington ..	1488	1630	1536	1556	1553	1476
Christchurch ..	1362	1474	1462	1438	1434	1328
Dunedin ..	1434	1595	1535	1553	1529	1432
Whangarei ..	1361	1566	1514	1527	1492	1354
Hamilton ..	1440	1550	1555	1580	1531	1420
Rotorua ..	1445	1555	1504	1526	1508	1419
Waihi ..	1417	1551	1527	1542	1509	1401
Gisborne ..	1457	1610	1566	1567	1550	1410
Napier ..	1474	1601	1542	1558	1544	1462
Dannevirke ..	1391	1537	1516	1447	1473	1391
New Plymouth ..	1443	1516	1466	1447	1468	1394
Wanganui ..	1391	1520	1500	1519	1483	1374
Taihape ..	1522	1606	1558	1571	1564	1506
Palmerston North	1287	1427	1411	1421	1387	1378
Masterton ..	1427	1529	1528	1472	1489	1426
Blenheim ..	1410	1530	1523	1528	1498	1382
Nelson ..	1434	1569	1542	1539	1521	1412
Greymouth ..	1467	1521	1457	1505	1488	1452
Ashburton ..	1433	1495	1440	1427	1449	1426
Timaru ..	1387	1473	1485	1491	1459	1321
Oamaru ..	1416	1531	1515	1470	1483	1413
Alexandra ..	1425	1499	1484	1463	1468	1442
Gore	1471	1553	1537	1538	1525	1434
Invercargill ..	1494	1571	1526	1503	1524	1378
Dominion weighted average	1431	1558	1512	1516	1504	1415

The index numbers for the dairy-produce group again show substantial increases over the previous year. The Dominion weighted index number advanced during 1919 by 89 points, the increase being shared by all centres.

This group is subject to much greater seasonal influences than are the groceries or meat groups. The fluctuation in prices of milk and butter, in accordance with the supply at different periods of the year, invariably brings about a high index number in the June quarter, to be followed, in most cases, by a fall in the September quarter's figures.

Taihape and Wellington show the highest prices of dairy-produce, while the least expensive are Palmerston North and Christchurch.

GROUP III.—MEAT.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers for each Quarter of 1919, and for the Average of the Four Quarters of 1919 and of 1918, for Twenty-five Representative Towns in New Zealand.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Town.	First Quarter, 1919.	Second Quarter, 1919.	Third Quarter, 1919.	Fourth Quarter, 1919.	Average of Four Quarters, 1919.	Average of Four Quarters, 1918.
Auckland ..	1573	1573	1611	1625	1596	1575
Wellington ..	1500	1492	1500	1522	1504	1476
Christchurch ..	1551	1483	1610	1784	1607	1540
Dunedin ..	1527	1507	1553	1766	1588	1507
Whangarei ..	1651	1651	1668	1679	1662	1681
Hamilton ..	1611	1628	1694	1791	1681	1476
Rotorua ..	1681	1738	1745	1779	1736	1696
Waihi ..	1718	1595	1577	1704	1649	1659
Gisborne ..	1544	1544	1555	1559	1551	1552
Napier ..	1502	1500	1507	1588	1524	1505
Dannevirke ..	1491	1440	1468	1471	1468	1515
New Plymouth ..	1607	1607	1615	1775	1651	1597
Wanganui ..	1600	1603	1608	1725	1634	1593
Taihape ..	1464	1452	1520	1620	1514	1521
Palmerston North	1585	1587	1587	1603	1591	1559
Masterton ..	1524	1516	1536	1551	1532	1518
Blenheim ..	1521	1531	1611	1720	1596	1505
Nelson ..	1568	1584	1768	1768	1672	1538
Greymouth ..	1775	1639	1727	1774	1729	1673
Ashburton ..	1647	1598	1609	1815	1667	1638
Timaru ..	1602	1592	1604	1653	1613	1587
Oamaru ..	1626	1618	1601	1773	1655	1611
Alexandra ..	1583	1583	1583	1598	1587	1537
Gore	1686	1678	1721	1836	1730	1669
Invercargill ..	1660	1661	1774	1876	1743	1657
Dominion weighted average	1558	1541	1589	1674	1591	1545

The increase in the index number for 1919 over that for 1918 is shown to be 46 points.

Of the four chief centres Christchurch has the highest number, being closely followed by Auckland and Dunedin.

The highest prices are shown by Invercargill and Rotorua, while Dannevirke and Wellington show the lowest.

THREE FOOD GROUPS.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers for each Quarter of 1919, and for the Average of the Four Quarters of 1919 and of 1918, for Twenty-five Representative Towns in New Zealand.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Town.	First Quarter, 1919.	Second Quarter, 1919.	Third Quarter, 1919.	Fourth Quarter, 1919.	Average of Four Quarters, 1919.	Average of Four Quarters, 1918.
Auckland ..	1507	1529	1565	1606	1552	1496
Wellington ..	1548	1555	1572	1626	1575	1521
Christchurch ..	1498	1443	1540	1642	1531	1438
Dunedin ..	1530	1515	1541	1664	1563	1488
Whangarei ..	1567	1624	1642	1664	1624	1550
Hamilton ..	1530	1561	1630	1713	1609	1472
Rotorua ..	1608	1640	1678	1731	1664	1579
Waihi ..	1551	1522	1561	1653	1572	1512
Gisborne ..	1565	1584	1628	1668	1611	1533
Napier ..	1531	1522	1540	1634	1557	1515
Dannevirke ..	1513	1515	1536	1558	1531	1469
New Plymouth ..	1530	1516	1537	1627	1553	1472
Wanganui ..	1493	1502	1549	1633	1544	1465
Taihape ..	1551	1565	1586	1682	1596	1541
Palmerston North	1482	1497	1521	1573	1518	1466
Masterton ..	1544	1548	1577	1618	1572	1510
Blenheim ..	1566	1583	1624	1713	1622	1487
Nelson ..	1536	1556	1625	1667	1596	1489
Greymouth ..	1622	1547	1577	1640	1597	1529
Ashburton ..	1594	1509	1522	1636	1565	1488
Timaru ..	1530	1497	1533	1576	1534	1470
Oamaru ..	1570	1537	1556	1646	1577	1514
Alexandra ..	1601	1577	1590	1617	1596	1549
Gore	1649	1595	1638	1718	1650	1544
Invercargill ..	1619	1580	1639	1699	1634	1537
Dominion weighted average	1527	1520	1563	1634	1561	1491

It will be remembered that the Dominion weighted average for Group I shows an increase of 82 points over 1918, while Groups II and III have increased 89 points and 46 points respectively. The three groups in combination show an increase in the Dominion weighted average of 70 points. Over the year 1919 Palmerston North was the cheapest town for foodstuffs, while Rotorua was the dearest.

GROUP IV.—HOUSE-RENT.

The cost of housing is an important item in the expenditure of the majority of families, and to obtain a record of fluctuations in this cost may be regarded as essential to a reasonably complete treatment of the subject of "cost of living." An attempt has accordingly been made to trace the movement of house-rents over a period of years, on the grounds that house-rentals provide a reasonably accurate indication of housing-costs in general, not only for those classes of persons who may be paying rent, but also for those who own or partially own the dwellings they occupy.

By reason of the fact that leases, infrequent changes of residence, and the difficulty of departing from customary rents all tend to make the movement of the general level of rents comparatively slow, it is not necessary to attempt to measure the changes over short periods. The data upon which the rent figures given hereafter have been compiled are collected each half-year in the months of February and August. Figures quoted in reference to rent for the first two quarters of the year are therefore based upon the data obtained in February, and those for the last two quarters on the data obtained in August.

It is advisable to specially mention that the index numbers in respect of rent indicate the movement in the average rentals of a large number of houses, and that they do not purport to convey any statement as to the price at which housing-accommodation may be *obtained* from time to time. At the present time the exceptional demand for housing-accommodation accompanied by restrictive legislation against advancement of house-rents has caused a wide disparity between the rentals of houses which have been let for some time and the rents charged to the new occupants of houses being relet at the present time. In so far as the number of "relettings" is relatively small, there has not been the substantial advance in house-rents during the past few years which might be gathered from an inspection of the price charged for the occupancy of houses now falling vacant.

Latterly an insecurity of tenancy, which is due largely to a severe housing shortage and the statutory rent restriction, has led to the purchase of an abnormal number of houses by persons formerly content to remain tenants. In the normal course of events it is the newer and better-class dwelling that is purchased, thus leaving an unduly large proportion of older and lower-rented dwellings. The effect of this is to artificially reduce the level or retard the rise of the house rent index.

AVERAGE RENTS IN THE FOUR CENTRES, 1919.

House of	Auckland.				Wellington.				Christchurch.				Dunedin.			
	Feb.		Aug.		Feb.		Aug.		Feb.		Aug.		Feb.		Aug.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
4 rooms ..	11	4	11	9	14	8	14	3	11	6	11	7	11	2	11	4
5 rooms ..	15	11	16	6	18	10	19	3	15	5	15	3	14	1	14	10
6 rooms ..	18	5	18	7	23	9	24	2	19	0	19	3	17	11	18	5
7 rooms ..	22	0	22	1	30	4	30	4	24	1	24	10	21	4	21	6

The index numbers for each of the twenty-five towns, according to returns collected in February and August, 1919, are given below, together with similar information for the previous year:—

HOUSE-RENT.—TWENTY-FIVE REPRESENTATIVE TOWNS.

Index Numbers for 1918 and 1919 for House-rent in Twenty-five Towns of New Zealand.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Town.	February, 1918.	August, 1918.	1918.	February, 1919.	August, 1919.	1919.
Auckland	994	1016	1005	1033	1055	1044
Wellington	1294	1295	1295	1309	1321	1315
Christchurch ..	973	1040	1007	1051	1057	1054
Dunedin	974	994	984	977	1006	992
Whangarei	917	887	902	900	979	940
Hamilton	1116	1147	1132	1127	1255	1191
Rotorua	997	975	986	992	962	977
Waihi	578	572	575	571	629	600
Gisborne	1063	1104	1084	1103	1102	1103
Napier	1049	1066	1058	1075	1072	1074
Dannevirke	685	771	728	764	781	773
New Plymouth ..	1015	1032	1024	998	1024	1011
Wanganui	1019	1030	1025	1053	1062	1058
Taihape	1229	1132	1181	1247	1151	1199
Palmerston North ..	978	998	988	991	1012	1002
Masterton	851	858	855	925	991	958
Blenheim	776	803	790	795	855	825
Nelson	916	925	921	945	937	941
Greymouth	700	713	707	748	675	712
Ashburton	862	878	870	864	870	867
Timaru	896	893	895	912	916	914
Oamaru	860	777	819	825	847	836
Alexandra	679	681	680	681	681	681
Gore	810	808	809	809	839	824
Invercargill	820	827	824	852	858	855
Dominion weighted average	1022	1044	1033	1053	1070	1062

PURCHASING-POWER OF MONEY, 1919.

An alternative statement of the difference in price-levels as between each of the twenty-five towns considered is given in the following table. Similar figures may easily be compiled for the various quarters by working from the index numbers and equating 1000 to 20s. The purchasing-power of money in the average of the five years 1909–13 in the four centres is taken as the base and equated to 20s., the indices being worked out proportionately. The amounts displayed in the table may be compared vertically but not horizontally, since the various groups have different bases.

AMOUNT REQUIRED TO PURCHASE IN TWENTY-FIVE REPRESENTATIVE TOWNS IN 1919 WHAT WOULD HAVE COST 20s. IN THE AVERAGE OF THE FOUR CHIEF CENTRES, 1909–13.

Town.	Group I. Groceries.		Group II. Dairy-produce.		Group III. Meat.		Groups I–III. Food Groups.		Group IV. House-rent.*	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Auckland	30	8½	30	4¼	31	11	31	0½	20	10½
Wellington	32	10½	31	0¾	30	1	31	6	26	3½
Christchurch	30	7¼	28	8¼	32	1¾	30	7½	21	1
Dunedin	31	2½	30	7	31	9	31	3	19	10
Whangarei	33	3¾	29	10	33	3	32	5¾	18	9½
Hamilton	31	10¼	30	7½	33	7½	32	2¼	23	9¾
Rotorua	33	10¼	30	2	34	8¾	33	3¼	19	6½
Waihi	30	10¾	30	2¼	32	11¾	31	5¼	12	0
Gisborne	33	10¼	31	0	31	0¼	32	2¾	22	0¾
Napier	31	9¼	30	10½	30	5¾	31	1¾	21	5¼
Dannevirke	32	3	29	5½	29	4¼	30	7½	15	5½
New Plymouth ..	30	4¾	29	4½	33	0¼	31	0¾	20	2¾
Wanganui	30	1½	29	8	32	8¼	30	10½	21	2
Taihape	33	7¼	31	3½	30	3¼	31	11	23	11¾
Palmerston North ..	30	8	27	9	31	9¾	30	4¼	20	0½
Masterton	32	11½	29	9½	30	7¾	31	5½	19	2
Blenheim	34	2½	29	11½	31	11	32	5¼	16	6
Nelson	31	6¼	30	5	33	5¼	31	11	18	9¾
Greymouth	31	0	29	9	34	7	31	11¼	14	3
Ashburton	30	11¼	28	11¾	33	4	31	3½	17	4
Timaru	30	3	29	2¼	32	3	30	8¼	18	3¼
Oamaru	31	4	29	8	33	1¼	31	6½	16	8¾
Alexandra	33	5¾	29	4¼	31	9	31	11	12	7½
Gore	33	1¼	30	6	34	7¼	33	0	16	5¾
Invercargill	32	2	30	5¾	34	10¼	32	8¼	17	0¾
Dominion weighted average	31	4¾	30	1	31	9¾	31	2¾	21	3

* Based on average of figures for February and August, 1919.

DOMINION INDEX NUMBERS, 1919.

To obtain a general estimate of the course of prices for the whole Dominion it has been necessary to obtain a weighted average of the index numbers for each town. It is obvious that it would not be strictly correct to obtain a simple average of the prices in Alexandra, with a population of 700, and in Auckland, with a population of over 140,000. Prices in each town have therefore been weighted in accordance with the number of people concerned, and a composite index number has been obtained, which, though artificial, represents the average level of retail prices in the Dominion.

The twenty-five towns considered have a total population of approximately half that of New Zealand, and they are therefore fully representative of the Dominion. The four chief centres, which include a third of the Dominion's population, account for about 70 per cent. of the population of the twenty-five towns, so that their influence in the Dominion index number is naturally predominating. This, however, is justifiable, since the chief centres

not only comprise a great part of the people of the Dominion, but also set the standard which is generally followed throughout the country. The Dominion weighted index number obtained is shown in the table below:—

Group.	First Quarter, 1919.	Second Quarter, 1919	Third Quarter, 1919.	Fourth Quarter, 1919.	Average of Four Quarters, 1919.	Average of Four Quarters, 1918.
Groceries ..	1554	1489	1570	1666	1570	1488
Dairy-produce ..	1431	1558	1512	1516	1504	1415
Meat	1558	1541	1589	1674	1591	1545
Three food groups	1527	1520	1563	1634	1561	1491
House-rent ..	1053	1053	1070	1070	1062	1033
Food and rent ..	1359	1356	1388	1434	1384	1326

A comparison between the yearly figures for 1919 and 1918, as shown in the last two columns, affords a clear indication of the extent to which prices have moved. As previously mentioned, the greatest advance during 1919 is shown by the dairy-produce group, while both groceries and meat prices have also risen considerably.

The following table gives a comparison between price-levels during 1919 in the four chief centres and in the twenty-one smaller towns from which information is collected.

Group.	Weighted Average of Four Chief Centres. (*a*.)	Weighted Average of Twenty-one Smaller Centres. (*b*.)	Excess of (*a*) over (*b*).
Groceries	1565	1581	−16*
Dairy-produce	1509	1494	+15
Meat	1575	1629	−54*
Three food groups..	1554	1577	−23*
House-rent	1103	962	+141
Food and rent	1394	1357	+37

* Excess of (*b*) over (*a*).

These figures indicate that there is no very considerable difference between the general level of food-prices in the four chief towns and in the average of the twenty-one smaller centres, higher grocery and meat prices in the small towns being to some extent offset by lower prices for dairy-produce. House accommodation, however, as may be expected, is considerably cheaper in the country towns than in the more closely populated cities.

War Increases in Food-prices.

The *Monthly Abstract of Statistics* published by the Census and Statistics Office gives each month the latest available information on this subject. It is advisable to shortly indicate here the advance in prices in 1919 over those ruling at the outbreak of war.

TABLE SHOWING THE PERCENTAGE OF INCREASE IN FOOD-PRICES RULING DURING 1919 OVER PRICES RULING ON 31ST JULY, 1914.

Group.	First Quarter, 1919.		Second Quarter, 1919.		Third Quarter, 1919.		Fourth Quarter, 1919.		Average of Year 1919.	
	Index Number.	Percentage Increase.*	Index Number.	Percentage Increase.*	Index Number.	Percentage Increase.*	Index Number.	Percentage Increase.*	Index Number.	Percentage Increase.*
Groceries (index number, July, 1914: 1033)	1554	50·44	1489	44·14	1570	51·98	1666	61·28	1570	51·98
Dairy-produce (index number, July, 1914: 1057)	1431	35·38	1558	47·40	1512	43·05	1516	43·42	1504	42·29
Meat (index number, July, 1914: 1127)	1558	38·24	1541	36·73	1589	40·99	1674	48·54	1591	41·17
Three food groups (index number, July, 1914: 1070)	1527	42·71	1520	42·06	1563	46·07	1634	52·71	1561	45·89

* Over July, 1914.

It will be seen that, over the average for the year, food-prices show an increase since the outbreak of war of 45·89 per cent.

RETAIL PRICE MOVEMENTS, 1910–19.

The following general survey of the course of retail prices over a number of years has been brought up to date by the inclusion of the figures for 1919:—

GROUP I.—GROCERIES.

INDEX NUMBERS FOR FOUR CHIEF CENTRES, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910.. ..	1036	1017	964	1039	1014
1911.. ..	981	989	934	968	968
1912.. ..	1050	1013	986	1039	1022
1913.. ..	1064	1029	964	1036	1023
1914.. ..	1035	1082	1046	1056	1055
1915.. ..	1172	1227	1210	1219	1207
1916.. ..	1196	1269	1197	1192	1214
1917.. ..	1268	1395	1279	1248	1298
1918.. ..	1461	1579	1417	1503	1490
1919.. ..	1535	1644	1530	1560	1567

The outstanding feature illustrated by this table is, of course, the substantial advance in prices since the outbreak of war. The year 1916, however, saw a slight decline in prices in Christchurch and Dunedin as compared with the previous year. Wellington still remains considerably in advance of the other centres.

Group II.—Dairy-produce.

The prices of commodities included in the dairy-produce group have shown an almost continuous increase since 1891—an increase which during the war period has been considerably accelerated. The year 1916 disclosed a greater and more rapid movement than took place in any previous year for which prices are recorded. The increase in 1919 has also been substantial.

Index Numbers for Four Chief Centres, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910.. ..	965	996	920	997	970
1911.. ..	986	1018	948	1021	993
1912.. ..	998	1076	992	1052	1029
1913.. ..	1028	1124	1003	1044	1050
1914.. ..	1019	1114	1016	1065	1054
1915.. ..	1140	1196	1133	1146	1154
1916.. ..	1288	1350	1251	1263	1288
1917.. ..	1362	1425	1318	1351	1364
1918.. ..	1443	1476	1328	1432	1420
1919.. ..	1518	1553	1434	1529	1508

Group III.—Meat.

The index numbers for the meat group disclose no exceptional movement beyond the increase brought about by war conditions. For the last four years Wellington index numbers have been considerably below those of the other three centres, while Christchurch during 1919 displaced Auckland from its leading position, and is now by a small margin the most expensive of the four centres for this group.

Index Numbers for Four Chief Centres, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910.. ..	1047	1029	980	851	977
1911.. ..	1052	1034	995	900	995
1912.. ..	1033	1024	1034	915	1001
1913.. ..	1104	1139	1027	917	1047
1914.. ..	1266	1112	1061	1103	1136
1915.. ..	1293	1205	1191	1190	1220
1916.. ..	1413	1274	1313	1283	1321
1917.. ..	1500	1380	1449	1417	1437
1918.. ..	1575	1476	1540	1507	1525
1919.. ..	1596	1504	1607	1588	1574

Three Food Groups combined.

The index numbers given in the following table have been compiled from records of prices of the three separate food groups in such manner

as to show the movement of the general level of food-prices, care being taken to give each group its due importance:—

INDEX NUMBERS FOR FOUR CHIEF CENTRES, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13=1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910.. ..	1023	1016	960	965	991
1911.. ..	1006	1011	958	957	983
1912.. ..	1032	1031	1004	1000	1017
1913.. ..	1069	1089	995	997	1037
1914.. ..	1110	1100	1044	1074	1082
1915.. ..	1206	1216	1176	1191	1197
1916.. ..	1291	1290	1249	1244	1268
1917.. ..	1369	1397	1346	1328	1360
1918.. ..	1496	1521	1438	1488	1486
1919.. ..	1552	1575	1531	1563	1555

It will be noted that food-prices in the four centres, as recorded by the above index numbers, move with considerable uniformity, although the extent of the movement varies as between the different cities.

In pre-war years food-prices were slightly higher in Auckland and Wellington than in the two southern centres, this being mainly due to the difference in prices of agricultural products (flour, oatmeal, &c.), and meat. The position has now changed to a considerable extent, and Dunedin is now dearer than Auckland, although still cheaper than Wellington.

GROUP IV.—HOUSE-RENT.

The following table brings into prominence the high level of weekly rentals in Wellington as compared with the other three centres. During the war period and for some years prior to 1914 the increase in house-rents in Wellington has been such as to increase the disparity between the level of rents in that city and in the other three chief centres of the Dominion.

In 1919, however, Auckland and Christchurch showed far greater increases than did Wellington, but in spite of this the latter city still maintains its position—considerably above the other centres.

INDEX NUMBERS FOR FOUR CHIEF CENTRES, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13=1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres
1910.. ..	991	1100	933	936	990
1911.. ..	998	1088	923	938	987
1912.. ..	1065	1093	920	950	1007
1913.. ..	1044	1164	937	958	1026
1914.. ..	1044	1173	961	965	1036
1915.. ..	1005	1186	967	970	1032
1916.. ..	987	1216	949	965	1029
1917.. ..	977	1240	967	945	1032
1918.. ..	1005	1295	1007	984	1073
1919.. ..	1044	1315	1054	992	1101

GROUP V.—FUEL AND LIGHT.

Considerable difficulties are met with in any attempt to follow accurately the course of prices in this group. It has, in fact, been impossible to settle on any list of commodities which were used during the period under review in anything approaching comparable proportions in the four chief centres. The comparative usages of electric light, gas, kerosene, and candles vary greatly even between the four centres. Coal, too, presents a difficulty for comparative purposes in the several different classes of coal commonly used in the different towns.

However, a small group of seven items—coal, coke, firewood, kerosene, gas for lighting, electricity for lighting, and candles—has been considered, and prices in the four chief centres have been collected for as many past years as possible. Complete index numbers for this group have been compiled for 1907 and subsequent years. Figures for the past ten years are given in the table below.

INDEX NUMBERS OF COSTS OF FUEL AND LIGHTING (GROUP V) FOR FOUR CHIEF CENTRES, 1910–19.

(Base: Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910	898	1054	1075	896	981
1911	899	1053	1074	893	980
1912	919	1091	1117	920	1012
1913	928	1101	1150	960	1035
1914	991	1151	1162	925	1057
1915	991	1146	1145	965	1062
1916	1103	1203	1230	1073	1152
1917	1286	1306	1468	1214	1319
1918	1378	1408	1569	1333	1422
1919	1497	1514	1705	1504	1555

Over the average of the four centres a considerable advance in the index numbers of this group has been noticeable since 1911. This movement is common to all four cities, and was particularly rapid as between 1916 and 1917, when the general index number increased by 173 points. There were further considerable increases during 1918 and 1919.

Food Groups and Rent, 1910–19.

Index Numbers for Auckland, Wellington, Christchurch, Dunedin, and for Average of Four Centres for each Year, 1910–19.

(Base : Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Auckland.	Wellington.	Christchurch.	Dunedin.	Average of Four Centres.
1910.. ..	1012	1046	950	955	991
1911.. ..	1004	1038	946	950	985
1912.. ..	1044	1053	974	982	1013
1913.. ..	1061	1115	974	983	1033
1914.. ..	1087	1125	1015	1035	1066
1915.. ..	1135	1201	1101	1114	1138
1916.. ..	1186	1262	1144	1140	1183
1917.. ..	1231	1339	1210	1194	1244
1918.. ..	1320	1439	1281	1306	1337
1919.. ..	1372	1483	1364	1360	1395

The index numbers given above show the movement of prices of food and of house-rents combined. These figures accordingly present concise information as to the movement in the cost of a substantial proportion of the ordinary domestic necessities—food and housing.

Summary of Index Numbers.

Index Numbers of Retail Prices of All Groups of Commodities in the Average of the Four Chief Centres, 1910–19.

(Base : Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Group I: Groceries.	Group II: Dairy-products.	Group III: Meat.	Groups I–III: Food Groups.	Group IV: House-rent.	Groups I–IV. Food and Rent.	Group V: Fuel and Light.	Groups I–V. Food, Rent, Fuel, and Light.
1910	1014	970	977	991	990	991	981	990
1911	968	993	995	983	987	985	980	984
1912	1022	1029	1001	1017	1007	1013	1012	1013
1913	1023	1050	1047	1037	1026	1033	1035	1034
1914	1055	1054	1136	1082	1036	1066	1057	1065
1915	1201	1154	1222	1197	1032	1138	1062	1130
1916	1214	1288	1321	1268	1029	1183	1152	1180
1917	1298	1364	1437	1360	1032	1244	1319	1251
1918	1490	1420	1525	1486	1073	1337	1422	1346
1919	1567	1508	1574	1555	1101	1395	1555	1411

The following table, which is based on the average of the index numbers of the four chief centres as set out in the preceding table, gives an indication (in money figures) of the extent to which prices have risen during the period 1910–19. The table shows the amount necessary, on the average,

to purchase the same quantity of foodstuffs, house accommodation, and fuel and light as would have cost 20s. on the average in the four chief centres during the base period 1909–13.

Year.	Group I: Groceries	Group II: Dairy-products.	Group III: Meat.	Groups I–III: Food Groups.	Group IV: House-rent.	Groups I–IV: Food and Rent.	Group V: Fuel and Light.	Groups I–V: Food, Rent, Fuel, and Light.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1910 ..	20 3½	19 4¾	19 6½	19 9¾	19 9½	19 9¾	19 7½	19 9½
1911 ..	19 4½	19 10¼	19 10¾	19 8	19 9	19 8½	19 7¼	19 8¼
1912 ..	20 5¼	20 7	20 0¼	20 4	20 1¾	20 3	20 3	20 3
1913 ..	20 5½	21 0	20 11¼	20 9	20 6¼	20 8	20 8½	20 8¼
1914 ..	21 1¼	21 1	22 8¾	21 7¾	20 8½	21 3¾	21 1¾	21 3½
1915 ..	24 0¼	23 1	24 5¼	23 11¼	20 7¾	22 9	21 3	22 7¼
1916 ..	24 3½	25 9	26 5	25 4½	20 7	23 8	23 0½	23 7¼
1917 ..	25 11½	27 3½	28 9	27 2½	20 7¾	24 10½	26 4½	25 0½
1918 ..	29 9½	28 4¾	30 6	29 8¾	21 5½	26 9	28 5¼	26 11
1919 ..	31 4	30 2	31 5¾	31 1¼	22 0½	27 10¾	31 1½	28 2¾

NOTE.—These figures are comparable vertically but not horizontally. See above *re* figures for rent.

The general increase in prices has materially reduced the purchasing-power of the sovereign, as is shown by the following table, which sets out the relative "worth" in terms of commodities (but stated for convenience in terms of money) represented by a sovereign during the years 1910–19. The average "worth" in the years 1909–13 has been taken as a base and equated to 20s. The figures throughout are based on the average prices of the four chief centres.

Year.	Group I: Groceries.	Group II: Dairy-products.	Group III: Meat.	Groups I–III: Food Groups.	Group IV: House-rent.	Groups I–IV: Food and Rent.	Group V: Fuel and Light.	Groups I–V: Food, Rent, Fuel, and Light.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1910 ..	19 8¾	20 7½	20 5¾	20 2½	20 2½	20 2¼	20 4¾	20 2½
1911 ..	20 8	20 1¾	20 1¼	20 4¼	20 3¼	20 3¾	20 5	20 4
1912 ..	19 6¾	19 5¼	19 11¾	19 8	19 10½	19 9	19 9¼	19 9
1913 ..	19 6½	19 0½	19 1¼	19 3½	19 6	19 4¼	19 4	19 4
1914 ..	18 11½	18 11¾	17 7¼	18 5¾	19 3¾	18 9¼	18 11	18 9¼
1915 ..	16 7¾	17 4	16 4½	16 8½	19 4½	17 7	18 10	17 8½
1916 ..	16 5¾	15 6½	15 1½	15 9¼	19 5½	16 10¾	17 4½	16 11½
1917 ..	15 5	14 8	13 11	14 8½	19 4½	16 1	15 2	15 11¾
1918 ..	13 5	14 1	13 1½	13 5½	18 7¾	14 11½	14 0¾	14 10¼
1919 ..	12 9¼	13 3¼	12 8½	12 10¼	18 2	14 4	12 10¼	14 2

NOTE.—These figures are comparable vertically but not horizontally.

In the consideration of this table care must be taken that the figures are given their correct significance. In short, they represent—in money

figures—the worth (or purchasing-power) of a sovereign expended in purchasing the commodities shown at the heads of the columns, as compared with a sovereign of full purchasing-power in the average of the years 1909–13.

Another fact which must be noted is that the figures shown in this table will not rise or fall to equal extent with any movements shown in the index number, and the *percentage* rise or fall will not be the same both in this table and in the table of index numbers.

This may be explained by pointing out that an index number of 1333 would represent in the above table approximately 15s., 1000 being equal to 20s. In that case prices are 33⅓ per cent. higher than previously; or, in other words, the sovereign will purchase only *75 per cent.* of the amount of goods for which it could have been exchanged in the "base" period. It will accordingly be seen that the index number will reach 2000 before the purchasing-power of money has fallen another 5s.—*i.e.*, from 15s. to 10s.—and would move as high as 4000 before the purchasing-power of the sovereign fell to 5s. On the other hand, a falling index number will move relatively *less* rapidly than would the corresponding figure indicating the increasing purchasing-power of the sovereign.

WHOLESALE PRICES.

During the year 1917 a system for the regular collection of information regarding wholesale prices was put into operation, and this system will be continued in future.

A considerable volume of data has been obtained from merchants and traders by means of retrospective investigations covering the years 1891 to 1917, and the Census and Statistics Office has now been able to obtain sufficient information upon which to calculate index numbers to record the movement of wholesale prices over the period from 1891 to date.

The general index number is based upon the prices of 106 commodities or grades of commodities. From 1909 more detailed information is available, and index numbers for eight groups of commodities can be given. These groups cover the following numbers of articles: Group I, agricultural produce, 15; Group II, flour, bran, pollard, and oatmeal, 4; Group III, wool, hides, tallow, butter, and cheese, 14; Group IV, general merchandise and crockery, 44; Group V, building-materials (ironmongery and timber), 31; Group VI, leather, 7; Group VII, chemicals and manures, 21; Group VIII, coal, 4. The group index numbers accordingly represent, *in toto*, the price fluctuations of 140 articles or grades of commodities. Each article has been given a weight relative to its average annual pre-war consumption in the Dominion and, further, relative to its price. This system of weighting, known as the "aggregate-expenditure method," is the one adopted in the retail-prices inquiry.

A full report of the inquiry into the movement of wholesale prices will be published as early as circumstances permit. In the meantime index numbers for the years 1891 to 1919 are published in this section of the Year-book. Index numbers of current wholesale prices will be found in each issue of the *Monthly Abstract of Statistics.*

The following tables of index numbers have been compiled as indicated on page 802 :—

QUARTERLY GROUP INDEX NUMBERS OF WHOLESALE PRICES ON THE AVERAGE OF THE FOUR CHIEF CENTRES, 1914–19.

(Base : Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Quarter ended	Group I: Agricultural Produce.	Group II: Flour, Bran, Pollard, and Oatmeal.	Group III: Wool, Hides, Tallow, Butter, and Cheese.	Group IV: General Merchandise and Crockery.	Group V: Building-material.	Group VI: Leather.	Group VII: Chemicals and Manures.	Group VIII: Coal.
1914.								
March ..	907	990	1123	1078	1103	1172	1064	1003
June ..	969	1031	1159	1077	1109	1180	1077	1003
September ..	1033	1131	1115	1077	1123	1187	1080	1003
December ..	1176	1326	1067	1125	1144	1198	1082	1008
1915.								
March ..	1542	1589	1196	1175	1148	1286	1160	1016
June ..	1621	1727	1305	1186	1192	1349	1195	1014
September ..	1641	1605	1371	1216	1256	1368	1244	1014
December ..	1517	1298	1315	1229	1273	1388	1272	1031
1916.								
March ..	1480	1361	1337	1271	1334	1440	1375	1082
June ..	1305	1273	1402	1312	1448	1458	1417	1118
September ..	1461	1306	1436	1340	1485	1472	1494	1175
December ..	1702	1300	1430	1345	1508	1510	1495	1204
1917.								
March ..	1499	1419	1431	1367	1564	1676	1574	1267
June ..	1503	1447	1452	1407	1676	1795	1650	1330
September ..	1535	1459	1468	1463	1838	1853	1719	1432
December ..	1529	1436	1512	1551	2009	1901	1753	1445
1918.								
March ..	1582	1475	1470	1592	2007	1899	1817	1461
June ..	1716	1557	1462	1665	2077	1907	1965	1462
September ..	1902	1573	1463	1727	2209	1891	2070	1463
December ..	2181	1587	1467	1756	2300	1903	2071	1525
1919.								
March ..	1873	1573	1466	1735	2181	1887	1977	1535
June ..	1727	1525	1480	1709	2050	1915	1919	1557
September ..	1898	1516	1544	1808	2000	2117	1916	1688
December ..	1974	1521	1571	1933	2035	2344	2021	1809

GENERAL INDEX NUMBERS OF WHOLESALE PRICES: AVERAGE OF THE FOUR CHIEF CENTRES, 1891–1919.

(Base : Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Index Number.	Year.	Index Number.	Year.	Index Number.
1891 ..	994	1901 ..	931	1911 ..	994
1892 ..	972	1902 ..	975	1912 ..	1041
1893 ..	973	1903 ..	954	1913 ..	1032
1894 ..	927	1904 ..	922	1914 ..	1077
1895 ..	920	1905 ..	994	1915 ..	1269
1896 ..	943	1906 ..	1016	1916 ..	1380
1897 ..	942	1907 ..	1016	1917 ..	1555
1898 ..	972	1908 ..	1006	1918 ..	1809
1899 ..	893	1909 ..	949	1919 ..	1834
1900 ..	917	1910 ..	983		

GROUP INDEX NUMBERS OF WHOLESALE PRICES ON THE AVERAGE OF THE FOUR CHIEF CENTRES, 1910–1919.

(Base : Average aggregate annual expenditure, four chief centres, 1909–13 = 1000.)

Year.	Group I.: Agricultural Produce.	Group II.: Flour, Bran, Pollard, and Oatmeal.	Group III.: Wool, Hides, Tallow, Butter, and Cheese.	Group IV.: General Merchandise and Crockery.	Group V.: Building-material.	Group VI.: Leather.	Group VII.: Chemicals and Manures.	Group VIII.: Coal.
1910	1021	989	981	969	957	986	994	985
1911	991	972	1008	993	995	982	986	985
1912	1089	970	1029	1053	1037	993	1024	1011
1913	967	981	1047	1055	1063	1126	1035	1038
1914	1021	1120	1116	1089	1120	1184	1076	1004
1915	1580	1555	1297	1202	1217	1348	1218	1019
1916	1487	1310	1401	1317	1444	1470	1445	1145
1917	1517	1440	1466	1447	1772	1806	1674	1369
1918	1845	1548	1466	1685	2148	1900	1981	1478
1919	1868	1534	1515	1796	2067	2066	1958	1647

EXPORT PRICES OF MUTTON.

The following table shows the average export prices of mutton (per pound) in the Canterbury District during three quarters of 1919, and also the average for 1918:—

Item.	Average of Three Quarters, 1918	First Quarter, 1919.	Second Quarter, 1919.	Third Quarter, 1919	Average of Three Quarters, 1919.
	d.	d.	d.	d.	d.
Prime lambs up to 42 lb...	8¾	8¼	8½	9	8½
Prime wethers up to 72 lb.	6¾	6	6½	7	6½
Prime ewes up to 72 lb. ..	6¼	5½	6	6½	6

NOTE.—Figures for the fourth quarter of each year are not available.

BOARD OF TRADE.

The Board of Trade, set up under the provisions of the Cost of Living Act, 1915, and the Board of Trade Act, 1919, has carried out the functions of a price controlling and fixing authority since March, 1916.

SECTION XXIX.—WAGES.

In connection with the collection of manufactory statistics, which is now made annually, certain particulars are obtained with regard to the wage-rates of the employees in the various factories.

The summary which appears below covers the year 1918–19, and deals with some 58,909 employees, male and female. No claim is made for these figures that they cover all industries, or that they include all factories in any one industry. Information as to short time or overtime worked was also collected and compiled, but publication or discussion must await more space than is available within the reduced compass of this issue.

WAGE-RATES OF EMPLOYEES IN VARIOUS MANUFACTORIES, 1918–19.

Industry.	Number of Firms.	Weekly Wage-rate. Under 20s.	20s. and under 30s.	30s. and under 45s.	45s. and under 60s.	60s. and under 80s.	80s. and under 100s.	100s. and under 120s.	120s. and over.	Total Employees.
Males.										
Aerated waters and cordials	101	7	29	46	82	219	28	7	2	420
Agricultural machinery	25	52	30	30	28	354	108	23	1	626
Asphalt	5	..	..	..	1	15	4	..	..	20
Baking-powder	4	26	10	5	4	9	..	1	..	55
Baskets and perambulators	15	5	7	13	8	43	6	..	..	82
Biscuits and confectionery	48	88	119	167	125	165	59	20	6	749
Boiling-down and manure	35	3	..	13	8	413	140	6	2	585
Boots and shoes	77	80	89	90	45	727	294	26	4	1,355
Brewing and malting	55	..	8	19	53	662	55	10	10	817
Brick, tile, and pottery	70	3	12	43	71	582	90	11	13	825
Brushes and brooms	9	10	6	18	21	31	10	2	1	99
Butter and cheese	321	10	24	71	167	1,119	307	40	6	1,744
Chemicals	11	2	5	2	5	22	4	3	..	43
Clothing and dressmaking	173	24	40	53	30	256	103	23	9	538
Coachbuilding	123	58	52	68	38	230	241	13	..	709
Coopering	24	5	11	15	9	193	24	2	1	260
Electrical engineering	13	45	25	10	17	45	18	3	1	164
Electroplating	8	6	4	6	1	5	3	1	..	26
Electric supply	42	17	22	18	38	200	116	26	3	440
Electric tramways	10	5	6	10	55	1,317	480	4	..	1,882
Engineering	128	314	283	115	38	711	723	76	5	2,265
Engraving	13	6	6	3	9	..	8	1	1	34
Fibrous plaster	13	3	6	1	5	67	9	3	..	94
Fish-curing	11	..	1	2	8	43	28	1	4	87
Flax-milling	79	4	3	21	31	401	457	116	184	1,217
Furniture and cabinetmaking	208	233	72	85	44	541	402	21	1	1,399
Gas	51	12	15	16	122	670	293	14	2	1,144
Grain-milling	44	5	14	17	13	329	68	7	2	455
Ham and bacon	24	..	4	8	5	116	37	3	4	177
Hats and caps	17	5	11	2	4	33	9	4	0	68
Iron and brass	32	27	27	14	30	217	102	16	6	439
Jam and fruit	11	14	14	21	30	71	15	2	1	168
Jewellery and watches	54	35	18	19	8	64	62	11	3	220
Leadlight and bevelled glass	14	2	7	7	17	49	5	2	..	89
Leather goods	16	14	9	11	5	13	21	4	1	108
Lime and cement	17	..	4	9	13	439	46	6	..	517
Mattresses and bedding	12	8	5	11	8	32	17	2	..	83
Meat freezing and preserving	53	10	55	153	114	3,100	2,017	534	967	6,950
Monumental masonry	21	7	5	8	4	73	35	1	1	137
Motor and cycle engineering	329	252	210	226	120	345	327	12	45	1,637
Musical instruments	10	10	8	..	5	36	7	4	2	72

WAGE-RATES OF EMPLOYEES IN VARIOUS MANUFACTORIES—*continued.*

Industry.	Number of Firms.	Weekly Wage-rate. Under 20s.	20s. and under 30s.	30s. and under 45s.	45s. and under 60s.	60s. and under 80s.	80s. and under 100s.	100s. and under 120s.	120s. and over.	Total Employees.
Males—continued.										
Printing and bookbinding ..	252	343	233	236	90	643	986	177	73	2,781
Proprietary medicines ..	16	4	4	5	16	30	6	1	..	66
Ranges	8	8	7	5	2	125	20	3	1	171
Rope and twine ..	7	3	14	34	43	68	16	2	..	180
Saddlery and harness ..	62	30	21	16	5	145	85	5	1	308
Sail, tent, and oilskin ..	33	4	7	10	9	43	19	..	..	92
Sauce, pickle, and vinegar ..	16	8	5	20	41	50	5	1	1	131
Sausage-casings	14	1	1	7	7	80	89	79	32	296
Sawmills, sash and door ..	334	42	68	120	118	2,260	2,081	428	113	5,230
Ship and boat building ..	22	40	30	18	10	329	193	3	1	633
Soap and candles	18	10	12	12	11	128	18	7	1	199
Stone-crushing	32	1	..	1	7	291	82	1	..	383
Tailoring	326	27	20	27	39	379	191	48	18	749
Tanning, fellmongering, and wool-scouring	73	6	19	38	39	954	352	122	79	1,609
Tea-packing	22	14	29	17	6	34	6	2	..	108
Tinsmithing	76	51	58	65	53	180	225	7	7	646
Wireworking	14	5	5	6	7	22	6	..	..	51
Woodware and turnery ..	62	27	19	22	14	173	117	10	1	382
Woollen goods	11	27	40	33	130	381	81	6	6	704
Industries employing under fifty people	149	38	66	77	89	598	96	17	4	985
Totals	4,193	2,096	1,934	2,215	2,184	20,909	11,457	2,083	1,626	44,504
Females.										
Biscuits and confectionery ..	48	194	378	185	16	4	..	..	..	777
Boots and shoes	77	169	185	383	64	11	..	..	..	812
Brushes and brooms ..	9	5	18	29	1	..	..	..	..	53
Butter and cheese	321	..	20	18	2	3	..	..	..	43
Chemicals	11	12	30	7	1	..	..	..	..	50
Clothing and dressmaking ..	473	2,044	1,677	2,706	279	109	40	22	15	6,892
Furniture and cabinetmaking ..	208	15	20	60	9	4	1	..	..	109
Hats and caps	17	62	79	84	9	6	2	..	..	242
Hosiery	8	35	49	42	1	2	..	..	..	120
Jam and fruit	11	16	62	23	1	..	..	..	..	102
Leather goods	16	13	21	15	1	..	..	..	..	50
Mattresses and bedding ..	12	17	25	46	2	2	..	..	..	92
Meat freezing and preserving ..	53	..	11	19	15	1	..	..	..	46
Paper bags and boxes ..	8	18	41	31	3	..	..	..	..	91
Printing and bookbinding ..	252	284	264	348	58	11	2	..	..	967
Proprietary medicines ..	16	26	23	15	..	2	..	..	..	66
Sail, tent, and oilskin ..	33	19	52	51	5	1	..	..	..	128
Sauce, pickle, and vinegar ..	16	31	62	9	1	1	..	..	..	104
Soap and candles	18	3	24	4	..	..	..	..	..	31
Tailoring	326	264	176	1,124	193	21	2	..	3	1,783
Tea-packing	22	31	28	15	2	..	..	..	..	76
Tinsmithing	76	10	28	9	..	..	..	..	..	47
Woollen goods	11	132	160	661	97	37	..	..	..	1,087
Umbrellas	10	8	18	12	1	..	..	..	..	39
Industries employing under thirty people	2,141	78	272	199	35	4	1	..	..	589
Totals	4,193	3,484	3,723	6,095	796	219	48	22	18	14,405

SECTION XXX.—REPATRIATION OF DISCHARGED SOLDIERS.

UNDER the provisions of the Repatriation Act, 1918, a Department was created bearing the name of the "Repatriation Department," whose aim it was "to help every discharged soldier requiring assistance to secure for himself a position in the community at least as good as that relinquished by him when he joined the colours." The controlling authority is the Repatriation Board consisting of four Ministers of the Crown, with a Director of Repatriation as chief executive officer.

In each of the four centres District Repatriation Boards, composed of prominent citizens nominated by such bodies as the Returned Soldiers' Association, the National Efficiency Board, the labour organizations, and the industrial, commercial, and patriotic interests of the community have been established, and departmental offices have been opened and staffed with discharged soldiers under the control of District Repatriation Officers at Auckland, Wellington, Christchurch, and Dunedin.

Repatriation Committees on a similar basis have been formed in the chief provincial towns, and offices with paid staffs are established in the following centres:—

Hamilton	Napier	Wanganui	Nelson	Timaru
Rotorua	Hastings	Palmerston North	Blenheim	Oamaru
Gisborne	New Plymouth	Masterton	Greymouth	Invercargill.

In addition to this some sixty-four honorary committees have been established throughout the country.

Under the Repatriation Act and the instructions issued in connection therewith a wide range of assistance is available to discharged soldiers. This assistance may be summarized under three main headings, viz.:—Employment; Training; and Financial Assistance.

EMPLOYMENT.

It is found from experience that only some 25 per cent. of the discharged soldiers desire the assistance of the Government. The remaining 75 per cent. apparently either resume their pre-war billets or find no difficulty in obtaining the work they desire.

The following table shows the number of men placed in the various groups of industry in each of the four districts:—

Group.	Auckland.	Wellington.	Canterbury.	Otago.	Total.
1. Wood, furniture, timber, &c.	312	391	236	200	1,139
2. Engineers, metal-workers ..	373	568	231	274	1,446
3. Food, tobacco, &c. ..	145	204	194	90	633
4. Clothing, boots, &c. ..	105	205	142	113	565
5. Books, printing, &c. ..	94	92	96	44	326
6. Other manufacturing ..	202	136	210	96	644
7. Building	228	262	200	74	764
8. Mining, quarrying, &c. ..	69	106	187	68	430
9. Rail and tram services ..	79	217	174	107	577
10. Other land transport ..	196	224	221	92	733
11. Shipping, wharf labour, &c.	65	105	122	58	350
12. Pastoral, agriculture, &c. ..	521	1,176	475	395	2,567
13. Domestic, hotels, &c. ..	169	321	163	79	732
14. General labour, and miscellaneous	932	1,488	996	676	4,092
15. Clerical	294	509	299	205	1,307
16. Government	347	747	268	384	1,746
Totals	4,131	6,751	4,214	2,955	18,051

In June, 1920, the number of men on the unemployment sustenance list for the whole of the Dominion was only five out of a total of 79,604 returned to date.

Unemployment sustenance (inclusive of pension) is paid on the following basis: Soldier, £2 2s. per week; wife, 10s. per week; children (not exceeding four), 3s. 6d. per week each. In addition, an allowance of 5s. per week is payable if warranted by circumstances. A widower with children is entitled to sustenance allowance as though his wife were living.

Transportation and Medical Fees.—The Department pays transportation of soldiers proceeding to employment, &c., and medical fees of those examined for appointment to the Public Service.

TRAINING.

It is necessary to provide training for—

(*a.*) Partially disabled soldiers who owing to war service are unable to resume their pre-war occupations:
(*b.*) Those who enlisted at a comparatively early age and who had not yet acquired a trade or calling:
(*c.*) Apprentices whose indentures had been interrupted by war service:
(*d.*) Soldiers' widows.

The arrangements made and the financial assistance provided during tuition are set out hereunder.

Subsidized Workers.—Discharged soldiers desirous of learning new trades or occupations, and who can be best trained within the environment of the trade itself, are placed in the workshops or factories of private employers under the subsidized-wages scheme.

The employer undertakes to train the applicant in the particular trade or calling, and pays the trainee a wage as fixed by a wages committee consisting of a representative of the trade-union concerned, the employer, and a representative of the Repatriation Department. The difference between the employer's wage and £3 per week is made up by the Department, such subsidy being quite irrespective of any pension allowance which the trainee is receiving. The wage paid by the employer is reviewed quarterly by the wages committee, and any increase granted during the currency of the permit is paid to the trainee and does not affect the Government subsidy. A proportion of the subsidy payable (amounting to 5s. per week) is retained by the Department, and is paid to the trainee on the satisfactory completion of the training.

Under this scheme, which is greatly assisted by the co-operation of the various trade-unions, training and employment has been arranged for a total of 3,211 men, and at the present time 2,249 are actually being trained in workshops and factories throughout the Dominion.

Special Soldier Classes and Technical Schools.—Vocational training in new trades is also arranged in the various technical schools, and special soldier classes have been formed in the main centres.

Sustenance to trainees: Sustenance is paid to technical trainees as follows:—

Attending special soldier classes thirty hours or more per week: Soldier £2 10s. per week; wife, 10s. per week; children (not exceeding four) 3s. 6d. per week each, plus pension.

Attending ordinary technical-school classes: As above, but inclusive of pension.

Training under this particular scheme has been arranged for 1,461 men to date, and there are 978 attending the classes at the present time.

University training: Fees, also grants for necessary text-books up to £5 5s., are paid by the Department in approved cases, and sustenance is paid on the same basis as that laid down for technical trainees.

Facilities have been arranged to offer encouragement to discharged soldiers to take up farming pursuits. The Ruakura Government Experimental Farm, near Hamilton, affords instruction in beekeeping, fruitgrowing, and poultry-raising. Fit men requiring training in specialized subjects are also accommodated at the Weraroa Training-farm at Levin.

Other institutions are the Moa Seed-farm (Otago), and the Avonhead (Auckland), Motuihi (Auckland), Wairarapa, and Tauherenikau (for tubercular men) Farms.

The sustenance allowance payable to trainees at the State Farms: Soldier, £2 10s. per week; wife, 10s. per week; children (not exceeding four), 3s. 6d. per week each, plus pension. £1 per week is deducted for the soldier's board and lodging.

The subsidized-wages scheme is also available.

At the present time seventy-two men are being trained under this scheme, and indications go to show that as the fit men are discharged larger numbers are likely to seek assistance in this direction in the future.

Accommodation is provided for discharged soldiers at the State forest plantations at Waireka (Rotorua) and Tapanui (Central Otago). Fifty-three are at present thus employed

Discharged soldiers whose apprenticeship has been broken by war service and who are compelled to resume work at a small wage are financially assisted in order that their income may be not less than £3 per week (plus 5s. if married), irrespective of pension if any.

Training facilities in useful occupations for soldiers' widows without children, and sustenance whilst undergoing training at such rate as will bring their income, inclusive of pension, up to £1 15s. per week, may also be afforded.

The total number of men for whom training has been arranged to date under the various schemes is 5,661, and of this number 3,227 are still in training.

Financial Assistance.

District Boards or Local Committees are empowered to grant financial assistance to discharged soldiers or soldiers' widows on the following terms:—

Business Loans.—Loans not exceeding £300 to establish or purchase businesses may be made for a term of years with or without security; £50 is loaned free of interest, the remainder bearing interest at 5 per cent. per annum.

All loans exceeding £50 must be approved by the Ministerial Board, and up to the 20th June, 1920, a total of 3,864 loans have been ratified, entailing an expenditure of £878,927.

Furniture, Tools of Trade, Equipment, &c.—Loans not exceeding £50 (£75 in case of furniture, free of interest) may be made for the purchase of these items.

The number of applications approved under this heading to June, 1920, over 7,854, and of this number 7,005 are for the purchase of household furniture.

Assisted Passages.—Grants not exceeding £50 may be made to an incapacitated soldier or the widow of a deceased soldier in respect of passage-money beyond New Zealand. Only ninety-three have been approved to date.

Expenditure.

The total amount advanced to or expended on behalf of soldiers from the inception of the Department to the 20th June, 1920, was £1,222,854.

Loans.	£	*Grants.*	£
Business	773,149	Training fees, sustenance, &c.	155,023
Furniture	270,237	Unemployment sustenance	4,918
Tools, &c.	15,861	Transportation	3,666

Of this total it will be noted that the bulk (86 per cent.) is by way of loan and is repayable by the soldier. Some £206,585 has already been repaid.

Administration expenses to the same date were £64,522.

SECTION XXXI.—MISCELLANEOUS.

Public Trust Office.

This Office is designed mainly to afford, at low rates of commission, a secure and convenient recourse in every case where a person residing either in New Zealand or abroad, and desiring to form a trust or appoint an agent or attorney in the Dominion, may be in doubt or difficulty as to the choice of a trustee, executor, agent, or attorney. The Office is also designed to relieve those who may be appointed trustees of property in the Dominion, or who, after having accepted the trusts of such property, may, for various reasons, be unwilling or unable to undertake or continue the administration.

The Public Trust Office has been in operation since 1873. At the end of that year the number of estates administered by the Office was 257, of a total value of £17,500; by the 31st December, 1890, the number had risen to 1,678, of a value of £1,240,097; and at the 31st March, 1920, was 14,679, of a value of £14,330,980.

Financial Year ended 31st March.	Number.	Value.	Financial Year ended 31st March.	Number.	Value.
		£			£
1911 ..	5,966	5,477,675	1916 ..	8,734	8,217,500
1912 ..	6,456	5,951,231	1917 ..	*	*
1913 ..	7,225	6,782,532	1918 ..	14,187	10,835,085
1914 ..	7,538	7,288,447	1919 ..	15,223	12,807,214
1915 ..	8,026	7,942,158	1920 ..	14,679	14,330,980

* Not available.

The above table does not include the following classes of accounts and funds: Investment agencies; sinking funds; pension funds; Maori Land Board funds; funds under the Land Settlement Finance Act, 1909; Office funds; miscellaneous funds; miscellaneous Native accounts; Office premises, furniture, &c.

Building Societies.

There were 109 registered building societies in operation during the financial year 1919–20. Of these, 73 were terminable societies and 36 were permanent.

The dates upon which these societies close their accounts vary considerably within the year, but the figures given below may be taken as approximately corresponding to the periods stated.

LIABILITIES OF BUILDING AND INVESTMENT SOCIETIES.

Year.	To Shareholders (including Reserve Funds and Undivided Profits).	Deposits.	To Bankers and other Creditors.	Total Liabilities.
	£	£	£	£
1915–16 ..	2,290,473	674,512	126,160	3,091,145
1916–17 ..	2,277,072	725,469	138,399	3,140,940
1917–18 ..	2,290,924	717,188	181,092	3,189,204
1918–19 ..	2,315,378	693,890	244,485	3,253,753
1919–20 ..	2,441,510	803,683	309,435	3,554,628

ASSETS OF BUILDING AND INVESTMENT SOCIETIES.

Year.	Advances on Mortgage.	Other Investments.	Cash in Hand and on Deposit.	Total Assets.
	£	£	£	£
1915–16 ..	2,893,956	87,577	109,612	3,091,145
1916–17 ..	2,927,859	89,904	123,177	3,140,940
1917–18 ..	2,971,119	100,103	117,982	3,189,204
1918–19 ..	3,008,289	84,732	160,732	3,253,753
1919–20 ..	3,286,393	113,058	155,177	3,554,628

JOINT-STOCK COMPANIES.

During the year ended 31st December, 1919, 328 joint-stock companies were registered, with a total nominal capital of £5,942,605, including 248 private companies, with a nominal capital of £2,025,755.

The following table gives the total number of companies and the aggregate nominal capital registered during each of the five years 1915–19:—

Year.	Number of Companies registered.	Aggregate Nominal Capital.
		£
1915	304	4,431,830
1916	258	4,072,803
1917	261	3,367,201
1918	200	3,055,351
1919	328	5,942,605

FRIENDLY SOCIETIES.

The Registrar of Friendly Societies received returns for the year 1919 from 735 lodges, courts, tents, &c., having a membership at the end of the year of 70,598.

The total value of the assets of these societies was £2,184,653, of which the value of the sick and funeral benefit funds (including surplus) was £1,923,347.

The total membership and funds of the 735 lodges, courts, &c., and of the various orders at 31st December, 1919, were,—

FRIENDLY SOCIETIES.—MEMBERSHIP AND FUNDS, 1919.

Name of Order.	Number of Members.	Total Worth of Funds.
		£
Independent Order of Odd Fellows, M.U.	21,611	921,051
Independent Order of Odd Fellows of New Zealand ..	7,314	157,857
National Independent Order of Odd Fellows ..	377	5,273
British United Order of Odd Fellows	122	4,075
Ancient Order of Foresters	15,963	501,565
Ancient Order of Shepherds	48	1,316
United Ancient Order of Druids	16,226	344,350
Independent Order of Rechabites	3,788	109,862
Sons and Daughters of Temperance	595	26,070
Hibernian Australasian Catholic Benefit Society ..	3,197	49,239
Protestant Alliance Friendly Society of Australasia ..	830	28,098
Eden Temperance Benefit Friendly Society.. ..	30	2,957
Fountain of Friendship Lodge, Auckland	497	32,940
Totals	70,598	2,184,653

The next table shows the progress of the friendly societies of New Zealand during five years:—

FRIENDLY SOCIETIES.—MEMBERSHIP AND FUNDS.

Year.	Number of Lodges tabulated.	Number of Members.	Total Funds.	Average Capital.
			£	£ s. d.
1915	728	73,027	1,852,355	25 7 4
1916	727	70,360	1,954,940	27 15 8
1917	730	68,771	2,052,753	29 17 0
1918	731	67,527	2,100,443	31 2 1
1919	735	70,598	2,184,653	30 18 11

The value of the various funds and the way in which they are invested will be seen by reference to the following table. The funds include those of the central bodies.

FRIENDLY SOCIETIES.—FUNDS AND ASSETS ON 31ST DECEMBER, 1919.

Funds.		Assets.	
	£		£
Sick and Funeral Funds ..	1,923,347	Investments at interest ..	1,845,352
Surplus Appropriation Funds, &c.	95,468	Value of land and buildings	196,557
Management Funds, goods, &c.	107,999	Cash not bearing interest	94,844
		Value of goods	12,989
Widows' and Orphans' Funds	17,775	Other assets	31,581
Distress, Benevolent Funds, &c.	40,064	Owing by Management Fund	3,330
Total	2,184,653	Total	2,184,653

The net income from investments credited to the Sick and Funeral Funds during the year 1919 was £95,027, the average rate of interest earned being £5 2s. 8d. per cent.

Particulars are given of the number of members, the amount of accumulated capital, and the average capital per member of the friendly societies in the States of Australasia arranged in order of membership. Figures are based on returns to the 31st December, 1918, except for New South Wales.

FRIENDLY SOCIETIES IN AUSTRALASIA.—MEMBERSHIP AND FUNDS.

State or Dominion.	Number of Lodges.	Number of Members.	Amount of Funds.	Capital per Member.
			£	£ s. d.
New South Wales	1,884	178,857	2,113,754	11 16 4
Victoria	1,496	149,558	3,073,083	20 10 11
New Zealand	**731**	**67,527**	**2,100,443**	**31 2 1**
South Australia	509	67,047	1,377,149	20 10 10
Queensland	478	53,194	946,531	17 15 11
Tasmania	189	21,996	262,039	11 18 3
Western Australia	257	17,786	279,025	15 13 9

The outbreak of hostilities in August, 1914, caused considerable financial anxiety among the various friendly societies. In November, 1914, the Government undertook to subsidize the reinsurance of death benefits of soldier members on active service to the extent of paying one-half of the premiums. The sum of £11,867 was paid by the State under this system up to the 30th September, 1916.

From the 1st October, 1916, a Reinsurance Fund was established. The premium rate was ultimately 3½ per cent., and the surplus profits were to be divided *pro rata*. A summary of operations to the 31st March, 1920, is—

	£		£
Premiums from societies ..	31,497	Death claims	55,950
Penalties, &c.	368	Expenses	1,330
State subsidy	31,497	Surplus	6,082
	£63,362		£63,362

For the purpose of dealing with the problem of after-discharge sickness of soldier members each society was required to establish a special "After-discharge Sickness Fund." On the ascertainment of excess sickness in this way the Government provides half the amount of such excess.

A scheme for the extension of State benefits to members of friendly societies, on special terms, was embodied in the Finance Act, 1916 (Part IX).

PRIVATE WEALTH.

Estimates of the private wealth of the Dominion are arrived at on the assumption that the wealth per head of the living is approximately equal to that left by the average person dying. The fact that the younger and more numerous members of the population do not possess as much accumulated wealth as the older members, taken in conjunction with the fact that the death-rate varies with age, renders it necessary for this purpose to divide the population into quinquennial age-groups. The average wealth of persons dying within any one age-group being known, the average wealth of living persons belonging to that age-group is assumed to be identical, and an estimate of the total private wealth of the Dominion is arrived at by weighting the average wealth of persons in each age-group by the number of persons in that group.

The actual average wealth of deceased persons is obtained by a consideration of the estates certified for stamp duty. For each person whose estate is dealt with by the Stamp Duties Department a return is forwarded to the Census and Statistics Office showing name, date of death, amount of estate certified, and age. The few instances where the ages of deceased persons are not ascertainable are allocated to each age-group in proportion to its contribution to the total.

If the period under review be short, the infrequency of the appearance of large estates may occasion from time to time large discrepancies in the results according as many or few large estates appear in the returns. Matters are further complicated by the fact that from six to twelve months usually elapse from the date of death before the estate is finally certified, with the result that an abnormal number of deaths towards the end of any one year may swell the number of deaths for the year without affecting the number of estates certified, thus bringing about a fictitiously low average wealth of deceased persons for that year and a fictitiously high average wealth for the following year. The epidemic of influenza in the last quarter of 1918 produced just this effect. For these reasons it is desirable to extend the estimate over a series of years and strike an average. In former issues of the Year-book an average extending over ten years was taken, but with the rapid increase of values during the past five years so long a period yields an artificial estimate, and in this issue an average is taken over the years 1917–19. It should be noted that the estimate of private wealth therefrom relates to a period of time lying about the middle of 1918.

It has been found that the number of estates dealt with in any period is usually equal to about one-third only of the total deaths registered during that period; and as most persons leave some estate, however small, it is necessary to make some allowance for estimates which have not passed through the Stamp Duties Office. It should be noted in this connection that

estates below £200 in value are exempt from stamp and succession duty, though in many cases estates of a lower value than £200 are passed for probate or letters of administration. The method formerly adopted of making a proportionate allowance of 10 per cent. for all unrecorded estates involved a slight weakness, in that it gave too low an amount for persons dying at early ages and too high an amount for persons dying at advanced ages, so that while these factors balanced each other and did not affect very appreciably the total result it has been deemed better, in order to ensure closer accuracy, to make a fixed allowance increasing from £20 for the age-group 15 to 20 years to £100 at ages 35 to 40 and over. No allowance at all is made for estates of persons under 15.

From the following table it will be seen that the estimated private wealth of the Dominion in 1918 was £527,464,015.

ESTIMATED PRIVATE WEALTH, 1918.

Age, in Years.	Number of Estates certified (1917-19).	Total Amount, including Allowance for Unrecorded Estates.	Number of Deaths registered (1917-19).	Average Wealth per Person dying.	Mean Population 1918.	Estimated Private Wealth, 1918.
		£		£		£
Under 5	...	.....	5,370	...	135,812	...
5 and under 10 ..	3	1,864	838	1·8663	126,302	235,717
10 " 15 .	1	140	544	0·2574	112,324	28,912
15 " 20 ..	24	33,273	891	37·3434	93,588	3,494,894
20 " 25 ...	767	489,075	1,254	390·0120	74,889	29,207,609
25 " 30 ...	1,160	970,451	1,936	501·2660	85,849	43,033,185
30 " 35 ...	1,175	1,536,677	2,231	688·7839	90,239	62,155,170
35 " 40 ..	1,019	1,595,813	2,279	700·2251	87,265	61,105,143
40 " 45 ...	746	1,476,901	1,879	786·0037	68,195	53,601,522
45 " 50 ...	665	1,499,524	1,871	801·4559	62,457	50,056,531
50 " 55 ...	753	1,845,665	1,866	989·1024	46,386	45,880,504
55 " 60 ...	789	2,456,692	1,822	1,348·3436	35,310	47,610,013
60 " 65 ...	918	3,131,168	2,225	1,407·2665	29,501	41,515,769
65 " 70 ...	1,074	3,792,229	2,503	1,515·0735	21,385	32,399,847
70 " 75 ...	1,194	4,696,473	2,755	1,704·7089	15,602	26,596,868
75 " 80 ..	1,320	6,133,398	3,189	1,923·2982	10,845	20,858,169
80 " 85 ...	918	3,605,840	2,484	1,451·6264	5,015	7,279,906
85 " 90 .	403	1,587,162	1,323	1,199·6689	1,677	2,011,845
90 " 95 ..	102	382,839	348	1,100·1121	309	339,935
95 and over ...	31	67,053	92	728·8369	72	52,476
Totals .	13,062	35,301,927	37,700	936·3906	1,103,022	527,464,015

A point that should be borne in mind in regard to the figures given above is that no distinction is made between the wealth of males and that of females. As it is generally understood that the average for males is higher than that for females, and as of the estates passed for probate in 1919 those of males represented nearly three-fourths of the number and more than four-fifths of the total value, it would appear that greater accuracy would be obtained by treating the estates of the two sexes separately, making a fixed allowance for unrecorded estates ranging from £30 for males and £10 for females for the age-group 15 to 20 years to £150 for males and £50 for

females at ages 35 to 40 and over. This has been done, and a discrepancy emerges as follows:—

	£
(1) Sexes taken separately:—	
Males	384,533,161
Females	83,155,657
Total	467,688,818
(2.) Sexes taken together	527,464,015
Difference	£59,775,197

Estates of Maoris are excluded from the above calculation.

A table is now given showing the number of estates generally passed during 1918 and 1919, classified according to amount. In this table estates of Maoris are included.

Amount.	Number of Estates.		Aggregate Net Value of Estates.	
	1918.	1919.	1918.	1919
	£		£	£
Under .. .. 500 ..	1,732	2,202	438,785	531,089
500 and under 1,000 ..	1,001	1,176	671,878	828,180
1,000 „ 2,000 ..	624	783	883,385	1,100,224
2,000 „ 3,000 ..	314	340	716,774	836,591
3,000 „ 4,000 ..	139	183	496,787	629,900
4,000 „ 5,000 ..	105	118	500,438	529,884
5,000 „ 7,500 ..	138	159	914,875	966,801
7,500 „ 10,000 ..	93	69	769,074	584,697
10,000 „ 15,000 ..	78	88	953,845	1,057,209
15,000 „ 20,000 ..	34	41	599,193	908,838
20,000 and over	89	88	4,327,341	5,115,361
Totals	4,347	5,247	11,272,375	12,888,774

PATENTS, DESIGNS, AND TRADE-MARKS.

The present Act dealing with these subjects was passed in 1911 and came into force on the 1st July, 1912. An amending Act passed in 1914 enables the Governor-General in Council to order the avoidance or suspension of patents or trade-marks of subjects of a State at war with His Majesty.

There were 1,880 applications for letters patent during 1919; 995 were left with provisional specifications, and 885 with complete specifications; while 277 complete specifications were lodged in respect of applications with which provisional specifications had been previously filed.

The total number of applications received up to the 31st December, 1919, was 42,917, and the patents in force in New Zealand at that date numbered 4,623. The number of patent agents on the register was 22.

In the next table are shown the principal countries, residents of which applied for patents in New Zealand during the year 1919. Owing to applications being received from joint applicants resident in different countries, also from applicants giving two addresses, the figures total more than the actual number of applications received.

Applications for Patents in New Zealand, 1919.

Country.	Number.	Country	Number.
New Zealand	1,104	Canada	11
Australia	243	Sweden	19
Great Britain	276	Holland	10
United States of America ..	200	Denmark	9

The total number of applications during 1919 in respect of trade-marks was 1,272, and the fees received totalled £1,926. The number of trade-marks on the register at the end of the year was 10,903.

Of the 1,272 applications, 286 were made by residents of New Zealand, 445 came from Great Britain, 344 from the United States, and 136 from New South Wales and Victoria.

Seventy-three applications for registration of designs were received, and registration effected in 64 cases.

Climate and Meteorology.

For this issue of the Official Year-Book a special article on the Climate and Meteorology of New Zealand was prepared by Lieut.-Colonel D. C. Bates, Dominion Meteorologist. The reduction in size of the 1920 Year-Book has, however, necessitated its being held over. A limited number of copies have been issued in pamphlet form.

A comparative table of meteorology for 1919 follows:—

Stations.	Temperature in Shade.					Rainfall.		Mean Height of Barometer.	Prevailing Winds.
	Highest, and Date.	Lowest, and Date.	Mean Max. Temp. for Year.	Mean Min. Temp. for Year.	Mean Temp. for Year.	Days on which Rain fell.	Total Fall.		
	°F.	°F.	°F.	°F.	°F.	No.	Inches.	Inches.	
Auckland ..	81·0 Feb. 11 & 12	38·5 Sept. 8	63·8	50·8	57·3	174	33·55	30·001	SW, W.
Greenmeadows (Napier)	88·0 Jan. 22	29·5 July 17	65·6	47·2	56·4	58	22·60	29·973	NW, W.
Palmerston N.	80·0 Dec. 30	24·0 June 3	61·7	44·6	53·1	116	23·32	..	W, E.
New Plymouth	80·0 Feb. 23	31·0 May 26 & 27	64·1	49·4	56·7	178	47·03	..	SW, S.
Wellington ..	81·1 Feb. 24	29·9 June 1	60·5	48·7	54·6	136	28·51	29·967	NW, N S.
Nelson ..	83·5 Feb. 18	22·0 July 17	63·6	*	*	96	20·58	..	SW, NE. SE.
Hokitika ..	73·0 Dec. 31	26·5 June 27	57·5	44·0	50·7	205	99·53	29·984	SW, E.
Christchurch	82·7 Jan. 23	23·3 Sept. 2	60·9	43·4	52·1	110	21·70	29·902	NE, SW.
Lincoln ..	88·8 Feb. 18	21·8 Sept. 2	63·2	41·6	52·4	110	23·54	29·912	NE, SW
Waimate ..	89·0 Feb. 18	24·0 June 28	59·7	41·2	50·4	115	30·12	..	NE, SW.
Dunedin ..	84·0 Feb. 17 & 20	29·0 Sept. 1	58·3	43·0	50·6	175	42·90	29·890	SW, NE.
Invercargill ..	82·0 Feb. 21	19·0 July 31	57·6	40·6	49·1	230	53·73	..	SW, E.

* Incomplete.

SECTION XXXII.—OUTLYING ISLANDS OF NEW ZEALAND.

MOST of the statistical information given elsewhere in this book relates only to the three principal islands of the Dominion, with their adjacent islands and islets. There are, however, a number of outlying islands included within the boundaries of the Dominion, and brief descriptions of these are now given.

The outlying group of the CHATHAM ISLANDS, lying between the parallels of 43° 30′ and 44° 30′ south latitude, and the meridians of 175° 40′ and 177° 15′ west longitude, 480 statute miles east-south-east from Wellington and 536 miles eastward of Lyttelton, consists of two principal islands and several unimportant islets. They were discovered by Lieutenant Broughton and named by him in honour of the Earl of Chatham. The largest island (Chatham Island) contains about 222,490 acres, of which an irregularly shaped lake or lagoon absorbs 45,960 acres. About one-quarter of the surface of the land is covered with forest, the rest with fern or grass. The hills nowhere rise to a great height. Pitt Island is the next in size; the area is 15,330 acres. The greater portion of both islands is used for grazing sheep, the only other industry carried on to any extent being fishing. The islands are connected with the mainland by wireless telegraph, and there is also steamship communication at fairly regular intervals. The population at the census of 1916 consisted of 219 Europeans and 258 Maoris.

The KERMADEC GROUP of islands is situated between 29° 10′ and 31° 30′ south latitude, and between 177° 45′ and 179° west longitude. They are named the Raoul or Sunday Island, Macaulay Island, Curtis Islands, and L'Espérance or French Rock. The principal island, Sunday, is 600 miles distant from Auckland, and lies a little more than half-way to Tonga, but 100 miles to the eastward of the direct steam route to that place. It is 300 miles eastward of the steam route to Fiji, and 150 miles westward of the steam route from Auckland to Rarotonga. Macaulay Island (named after the father of Lord Macaulay) and Curtis Islands were discovered in May, 1788, by Lieutenant Watts, in the "Penrhyn," a transport ship. The remainder of the group was discovered in 1793 by Admiral Bruni d'Entrecasteaux. The Admiral gave the name of "Kermadec" to the whole group of islands, after the captain of his consort ship "L'Espérance," and the name of the Admiral's ship, "La Recherché," was given to the largest island. The name so given was not continued, but that of "Raoul" has taken its place, which would appear to have been given after the sailing-master of the "La Recherché," whose name was Joseph Raoul. The name of "Sunday" may have become attached to the island from the fact that it was discovered on a Sunday. The islands are volcanic, and in two of them signs of activity are still to be seen. The rainfall is plentiful, but not excessive. The climate is mild and equable, and slightly warmer than the north of New Zealand. The following are the areas of

the islands and islets of the group: Sunday Island, 7,200 acres; Herald group of islets, 85 acres; Macaulay Island, 764 acres; Curtis Islands, 128 acres and 19 acres; L'Espérance, 12 acres: total, 8,208 acres. Sunday Island is twenty miles in circumference, roughly triangular in shape, and at the highest point 1,723 ft. above the sea-level. It is rugged and broken over a very large extent of its surface, and, except in a few places, covered with forest. The soil everywhere on the island is very rich, being formed by the decomposition of a dark-coloured pumiceous tuff and a black andesitic lava, with which is closely mixed a fine vegetable mould. The great luxuriance and richness of the vegetation bear witness to the excellence of the soil, which is everywhere—except where destroyed by eruptions, and on the steep cliffs—the same rich loam. Want of water is one of the drawbacks. Three of the four lakes on the island are fresh, but so difficult of approach as to be practically useless. Various attempts at settlement have been made from time to time, but the islands are now uninhabited.

The AUCKLAND ISLANDS were discovered on 18th August, 1806, by Captain Abraham Bristow, in the ship "Ocean." The discoverer named the group after Lord Auckland, again visited the islands in 1807, and then took formal possession of them. They lie about 290 miles south of Bluff Harbour, their accepted position being given as latitude 50° 32′ south, and longitude 166° 13′ east. They have several good harbours. Port Ross, at the northern end of the principal island, was described by the eminent French commander D'Urville as one of the best harbours of refuge in the known world. At the southern end of the island there is a through passage extending from the east to the west coast. It has been variously named Adams Strait and Carnley Harbour, and forms a splendid sheet of water. The largest of the islands is about 27 miles long by about 15 miles broad, and is very mountainous, the highest part being about 2,000 ft. above the sea. The New Zealand Government maintains at this island a depot of provisions and clothing for the use of shipwrecked mariners.

The ANTIPODES, an isolated group, consisting of several detached rocky islands lying nearly north and south over a space of four to five miles; accepted position, 49° 41′ 15″ south, and longitude 178° 43′ east.

The BOUNTY ISLANDS, a little cluster of islets, thirteen in number and without verdure, discovered in 1788 by Captain Bligh, R.N., of H.M.S. "Bounty." Position verified by observation, 47° 43′ south, longitude 179° 0½′ east.

CAMPBELL ISLAND was discovered in 1810 by Frederick Hazelburgh, master of the brig "Perseverance," owned by Mr. Robert Campbell, of Sydney. It is mountainous, and of a circumference of about thirty miles. There are several good harbours. The island maintains two or three inhabitants.

The COOK ISLANDS, with others now included within the extended boundaries of the Dominion, are as under:—

RAROTONGA: A magnificent island, rising to a height of 3,000 ft., clothed to the tops of the mountains with splendid vegetation. It has abundant streams, considerable tracts of sloping land, and rich alluvial valleys. The two harbours are poor.

MANGAIA, the south-easternmost of the Cook Group, is of volcanic origin and about thirty miles in circumference. The productions, which are numerous and cheap, are obtained by assiduous labour.

ATIU resembles Mangaia in appearance and extent. It is a mere bank of coral 10 ft. or 12 ft. high, steep and rugged, except where there are small sandy beaches and some clefts, where the ascent is gradual.

AITUTAKI presents a most fruitful appearance, its shores being bordered by flat land on which are innumerable cocoanut and other trees, the higher ground being beautifully interspersed with lawns. It is eighteen miles in circuit.

MAUKE or Parry Island is a low-lying island; it is about two miles in diameter, well wooded, and inhabited.

MITIARO is a low-lying island, from three to four miles long and one mile wide.

HERVEY ISLANDS: This group consists of two islands surrounded by a reef which is about 10½ miles in circumference.

NIUE, or Savage Island, lying east of the Friendly Islands, is a coral island, thirty-six miles in circumference, rising to a height of 200 ft. It has the usual tropical productions.

PALMERSTON ISLAND, lying about 500 miles east of Niue and about 220 from the nearest island of the Cook Group (Aitutaki), is remarkable as the "San Pablo" of Magellan, the first island discovered in the South Sea. It has no harbour. The soil is fairly fertile, and there is some good hardwood timber.

MANAHIKI, lying about 400 miles eastward of Danger Island, is an atoll, about thirty miles in circumference, valuable from the extent of the cocoanut groves. The interior lagoon contains a vast deposit of pearl-shell.

PENRHYN ISLAND (Tongareva) lies about 300 miles north-east of Manahiki. It is one of the most famous pearl-islands in the Pacific, and there is a splendid harbour, a lagoon with two entrances, fit for ships of any size.

RAKAANGA is an atoll, three miles in length and of equal breadth.

DANGER ISLAND (Pukapuka): Next to the 10th parallel, but rather north of the latitude of the Navigators, and east of them are a number of small atolls. Of these, the nearest to the Samoan Group—about 500 miles—is Danger Island, bearing north-west of Suwarrow about 250 miles.

SUWARROW ISLAND has one of the best harbours in the Pacific. It lies about 500 miles east of Apia, the capital of German Samoa (now in British possession). It is a coral atoll, of a triangular form, fifty miles in circumference, the reef having an average width of half a mile across, enclosing a land-locked lagoon twelve miles by eight, which forms an excellent harbour. The entrance is half a mile wide, and the accommodation permits of ships riding in safety in all weathers, with depths of from three to thirty fathoms. It is out of the track of hurricanes, and supports a scant half-dozen inhabitants, but is capable by its fertility of supporting a larger population. As a depot for the collection of trade from the various islands it should in time be very valuable.

Islands annexed in 1901.

The Pacific islands annexed to New Zealand in pursuance of resolutions passed by the House of Representatives in September and October, 1900, were Rarotonga, Mangaia, Mauke, Atiu, Aitutaki, Mitiaro, Hervey Islands, Palmerston, Niue, Danger, Rakaanga, Manahiki, Penrhyn, and Suwarrow (see above); Takutea and Nassau, not mentioned in the resolutions, also lie within the boundary-lines prescribed by the Imperial Order in Council and the New Zealand Proclamation dealing with the annexation.

Constitution and Laws.

The Constitution and laws of the Cook Islands and Niue have been remodelled by the Cook Islands Act of 1915.

Island Councils were continued or established consisting either wholly or partly of *ex officio*, elected, or nominated members. Generally, European officials and Arikis or Native chiefs are Councillors *ex officio*, and nominated members hold office during the pleasure of the Governor-General or for a fixed period not exceeding five years. Women are eligible both as members and as electors of Island Councils.

Each Council is empowered to make laws for the good government of the island, with the proviso that such laws must not be repugnant to Acts of the New Zealand Parliament or regulations made thereunder. The maximum penalties imposed by the Ordinance of an Island Council must not exceed three months' imprisonment or a fine of £50. The Council has no power to deal with Customs duties, to borrow money, to establish Courts of justice, or to appropriate expenditure of revenue other than that raised under authority of their Ordinance. No Ordinance has effect until it has received the assent of the Resident Commissioner or the Governor-General. The Governor-General may, by notice in the *Gazette*, disallow any Ordinance within one year after the Commissioner has given his assent.

Laws are enforced through the High Court, which has all jurisdiction, civil or criminal, necessary for the administration of justice. Judges and Commissioners of the High Court are appointed by the Governor-General; the Chief Judge to reside at Rarotonga, a second at Niue. A Commissioner may, with some exceptions, exercise the full powers and functions of a Judge, but rules of Court may allow appeal from his decision to that of a Judge.

A judgment obtained in a civil proceeding in the High Court may be enforced in the Supreme Court of New Zealand. From any decision in the former Court an appeal lies to the Supreme Court in the Dominion.

The manufacture or importation of intoxicating liquor is prohibited absolutely, except that the Resident Commissioner may import liquor for sale or for public purposes. Liquor imported through the Commissioner must not find its way into the hands of a Native. Attempts are made by the Natives to evade the law by illicitly manufacturing "bush-beer," an offence which the Administration is endeavouring to check.

Population and Vital Statistics.

At the census of 1916 the population of the Cook and other islands annexed in 1901 was found to be 12,797. Fuller information is given in the portion of this book dealing with "Population." A system of compulsory registration of births, deaths, and marriages is now in force in the islands (see "Vital Statistics" section), and records of arrivals and departures are kept.

Education.

The educational requirements of the islands up to recent years have been largely met by missionary effort. The London Missionary Society has a number of village schools in the various islands, while the Roman Catholic Mission and the Seventh-day Adventists also maintain schools, though to a less extent.

The education provided in this manner is necessarily inadequate, and a system has been inaugurated by which schools have been established on the lines of the Native schools in New Zealand.

In Niue the Tufukia School has been established for some time, and a new school at Hakupu has just been built. At this institution the New Zealand syllabus has been adopted with gratifying results. Special interest is shown in the technical branch, and additional technical classes are given after school hours. The leading pupils are being trained with a view to taking charge of village schools which it is hoped may soon be established in other districts of Niue.

Regulations which came into force on the 1st January, 1917, make it compulsory for all children between seven and fourteen years of age to attend school if living within three miles of a public school.

In 1916, when education in the Cook Islands was placed under the control of the Minister, there were three schools in the Group, two being in Rarotonga and one at Aitutaki. These had an attendance of 450 pupils, under nine teachers. Since 1916 two new primary schools have been opened in Rarotonga—viz., Avarua and Titikaveka—one at Palmerston Island, one at Mauke, one at Mangaia, and one at Aitutaki. New schools at Atiu and Ngatangiia are in course of erection. These primary schools have more than a thousand scholars being taught by twenty-six teachers.

A technical school, also created since 1916, has been established at Avarua, with classes in agriculture, drawing, and woodwork, and an advanced class in carpentry. In most of the schools classes for simple cookery and for mat and basket weaving are held.

Three scholarships for annual competition, tenable for two years at St. Stephen's College, Auckland, and created by the Administration, were allotted this year.

Four advanced pupils are chosen each year from the Technical School and sent to Wellington to be apprenticed to trades. They are under a bond to return to Rarotonga on the completion of their apprenticeship. By this method the Administration intends to secure the necessary supply of skilled Native artisans required for the Group.

Revenue and Expenditure.

Cook and Northern Islands.—For the financial year ended the 31st March, 1920, the revenue of the Cook Islands, not including the balance from the previous year, was £22,880, and the expenditure £17,060. There is now a credit balance of £5,200. The following is a comparative statement of revenue and expenditure for the past ten years:—

Year.	Revenue.	Expenditure.
	£	£
1910-11	8,267	8,047
1911-12	8,924	9,430
1912-13	9,420	11,508
1913-14	11,723	10,194
1914-15	10,118	10,617
1915-16	7,673	9,081
1916-17	9,710	8,586
1917-18	11,068	12,615
1918-19	13,846	12,343
1919-20	22,881	17,061

The principal items in the revenue for 1919–20 were: Customs duties (Rarotonga and New Zealand), £11,290; export duties, £2,492; postage-stamps, £4,672; and fees and fines, High Court, £755.

Niue.—The revenue of Niue for the year ended the 31st March, 1920 (excluding balance from previous year), was £6,563. The expenditure amounted to £3,662. The total funds to the credit of the Niue Government on the 31st March amounted to £4,241.

Trade.

Cook and Northern Islands.—The value of exports for the year 1919 was £127,729, while the imports amounted to £142,925. The principal items exported were as follows:—

	£
Bananas, 31,494 cases	18,300
Coconuts, 2,780 sacks	1,490
Coffee, 20 tons	1,400
Copra, 2,145 tons	45,235
Oranges, 70,087 cases	36,030
Pearl-shell, 162 tons	14,480
Pineapples, 1,057 cases	580

The fruit trade is greatly retarded by lack of a good steamer service to New Zealand.

Trade with the United States is gaining rapidly in importance. The following shows the countries to which the exports were sent:—

	1916.	1917.	1918.	1919.
	£	£	£	£
New Zealand ..	**38,647**	**40,401**	**42,919**	**68,014**
United States ..	17,621	17,146	34,344	50,665
Tahiti	1,920	2,643	5,445	..
United Kingdom	9,958	..	..	9,050
	£68,146	£60,190	£82,708	£127,729

The principal importing countries are as follows:—

Imports from	1916. £	1917. £	1918. £	1919. £
New Zealand	**43,557**	**61,931**	**70,773**	**91,973**
Australia	914	1,714	1,682	3,005
United Kingdom	3,787	3,748	8,474	15,500
United States	8,241	11,092	15,324	27,605
Tahiti	1,569	1,110	2,504	3,808
Other countries	410	466	875	1,034
Totals	£58,478	£80,061	£99,632	£142,925

Niue.—The exports for 1919 amounted to £35,977, and the imports to £21,783. The principal items of export were,—

	£
Copra, 1,110 tons	31,029
Hats, 4,269 dozen	3,367

Of the total imports, New Zealand contributed goods to the value of £20,268. Two-thirds of the exports went to New Zealand, and the bulk of the remainder to the United States of America.

Samoa.

By virtue of the acceptance of the mandate from the League of Nations to administer the government of Western Samoa, these islands have now become for many purposes part of the territories of the Dominion of New Zealand.

The Chief Executive Officer is an Administrator, who is stationed at Apia. Colonel R. W. Tate, C.B.E., has been appointed to this position. Ministerial responsibility for the government is centred in the Minister of External Affairs. Laws are based on those of New Zealand, with the necessary modifications.

Geographical.

Western Samoa includes all islands lying between the 13th and 15th degrees of south latitude and the 171st and 173rd degrees of longitude west of Greenwich.

The principal islands are Savaii and Upolu. Savaii is the largest of the two, with a length of 48 miles, a breadth of 25 miles, and a total area of 660 square miles. The island is mountainous, rising to a height of over 4,000 ft. Upolu, which extends some 45 miles in length and 13 in breadth, measures nearly 600 square miles in area. Of the two, Upolu is the more fertile and populous, and contains the port and capital of Apia. Rainfall is plentiful throughout the Group.

Population, Revenue, etc.

The following particulars have been extracted from the Statesman's Year-book, 1920: At the census of 1917 the population (excluding the Force in occupation) numbered 41,128, some 1,668 of which were of European descent. Of the Europeans 660 were described as British, 530 as Germans, 236 as Americans, and 42 as Swedes. The influenza epidemic which swept Samoa in common with other countries during 1918–19 caused the loss of over 8,000 lives.

Most of the Natives profess the Christian religion, Protestant, Catholic, or Mormon. Education is chiefly in the hands of the mission schools, which

have over 8,000 pupils. The two Government schools accommodate about 800 pupils.

Roads, which are fairly good, extend over sixty miles.

For the financial year ended the 31st March, 1917, the revenue of Western Samoa was £98,937, and the expenditure £89,801.

Imports (exclusive of supplies for troops) were £319,521 in 1918, and exports £306,640.

Communication with the outer world is available through the high-powered wireless station at Apia. Apia is connected with New Zealand by a regular steam service.

NAURU.

Barely one-third of a degree south of the Equator, and lying some 166·55 degrees east of Greenwich, is the little phosphate island known as Nauru, or Pleasant Island. Prior to the world-wide conflagration of 1914–19 this rich though little-known island was a German possession. A mandate for the administration of the island was conferred by the Allied and Associated Powers upon the British Empire, to come into operation at the same date as the Treaty of Peace with Germany. The mandate is held jointly by the Imperial Government. the Government of Australia, and the New Zealand Government.

An agreement between the three parties to the mandate was drawn up and completed on the 2nd July, 1919. The administrative control of the island is vested in an Administrator, whose term of appointment is five years. The first Administrator is to be appointed by Australia. A Board of Commissioners comprising three members, one appointed by each Government, is established, and will have full control of the working and sale of the deposits and their products.

The yearly production of phosphates is to be allocated between the three Governments in the following proportions: United Kingdom, 42 per cent.; Australia, 42 per cent.; New Zealand, 16 per cent. This scale is subject to revision every five years. Any portion of its share not required by any Government may be disposed of either to the other Governments *pro rata*, or, if they do not require it, to others.

The value of Nauru lies almost wholly in the enormous quantity of phosphate it contains. Possession of from 80,000,000 tons to 100,000,000 tons of highest-grade (85 to 86 per cent.) phosphate makes Nauru the richest and best of the known phosphate islands of the world. The yearly output is approximately 150,000 tons.

DESCRIPTIVE.

Nauru, which is encircled by a road 10 miles long, has an area of only 5,000 to 6,000 acres. The island is surrounded by a wide reef. Near the coast is a belt of flat land covered with coconut-trees, of an area of about 1,400 acres. Behind this rises higher land covering some 4,250 acres, and enclosing a lagoon of almost fresh water. This higher country consists of a mass of phosphate of great richness.

There are some 1,200 Native inhabitants, who speak a language akin to that of the Gilbert-Islanders. Most of the workmen employed are Caroline-Islanders and Chinese. Nauru possesses a wireless station.

SECTION XXXIII.—STATISTICAL SUMMARY.

I.—POPULATION.

Year.	Population (exclusive of Maoris and for Annexed Pacific Islands) on 31st December.			Births.	Deaths.	Marriages.
	Males.	Females.	Totals.			
1855	20,781	16,411	37,192	1,460	470	406
1860	45,394	34,317	79,711	3,146	1,092	690
1865	117,376	73,231	190,607	7,490	2,757	1,908
1870	145,732	102,668	248,400	10,277	2,703	1,851
1875	213,294	162,562	375,856	14,438	5,712	3,209
1880	268,364	216,500	484,864	19,341	5,437	3,181
1885	312,125	263,101	575,226	19,693	6,081	3,813
1890	332,557	292,951	625,508	18,278	5,994	3,797
1895	369,725	328,981	698,706	18,546	6,863	4,110
1900	403,628	364,650	768,278	19,546	7,200	5,860
1905	467,366	415,096	882,462	23,682	8,061	7,200
1910	529,928	472,751	1,002,679	25,984	9,639	8,236
1911	539,729	485,677	1,025,406	26,354	9,534	8,825
1912	553,212	499,415	1,052,627	27,508	9,214	9,149
1913	569,109	515,553	1,084,662	27,935	10,119	8,813
1914	568,161	527,833	1,095,994	28,338	10,148	9,280
1915	563,963	538,831	1,102,794	27,850	9,965	10,028
1916	549,895	550,668	1,100,563	28,509	10,596	8,213
1917	537,360	560,312	1,097,672	28,239	10,528	6,417
1918	542,046	566,327	1,108,373	25,860	16,364	6,227
1919	588,888	575,517	1,164,405	24,483	10,808	9,519

II.—PRODUCTION.

Year.	Occupied and Cultivated Holdings over One Acre in Extent.	Land (including Sown Grasses) under Cultivation.	Live-stock.				Coal-mines, Output from.
			Horses.	Horned Cattle.	Sheep.	Pigs.	
	Number.	Acres.					Tons.
1871	10,211	1,140,279	81,028	436,592	9,700,629	151,460	*
1874	15,883	1,651,712	99,859	494,917	11,704,853	123,921	*
1878	20,519	3,523,277	137,768	578,430	13,069,338	207,337	162,218
1881	24,147	4,768,192	161,736	698,637	12,190,215	200,083	337,262
1886	31,763	6,668,920	187,382	853,358	15,174,263	277,901	534,353
1891	38,083	8,462,495	211,040	788,919	16,753,752	222,553	668,794
1896	..	10,698,869	237,418	1,047,901	19,138,493	239,778	792,851
1901	62,786	12,636,035	266,245	1,256,680	20,233,099	250,975	1,227,638
1906	69,942	14,114,925	326,537	1,810,936	20,108,471	249,727	1,729,536
1911	73,876	16,154,218	404,284	2,020,171	23,996,126	348,754	2,066,073
1912	..	..	..	..	23,750,153	..	2,177,615
1913	..	..	..	..	24,191,810	..	1,888,005
1914	..	..	..	..	24,798,763	..	2,275,593
1915	..	..	..	..	24,901,421	..	2,208,624
1916	77,229	16,984,174	371,331	2,417,491	24,788,150	297,501	2,257,135
1917	79,536	17,064,797	373,600	2,575,230	25,270,386	283,770	2,068,419
1918	80,146	17,386,160	378,050	2,869,465	26,538,302	258,694	2,034,250
1919	80,468	17,613,337	363,188	3,035,478	25,828,554	235,347	1,847,848

* Prior to 1878, 709,931.

III.—Trade.

Exports (the Produce of New Zealand).

Year.	Wool.		Grain.		Frozen Meat.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb.	£	Centals.	£	Cwt.	£
1855	1,772,344	93,104	79,206	82,302	..	..
1860	6,665,880	444,392	25,285	13,112	..	..
1865	19,180,500	1,141,761	11,112	6,076	..	..
1870	37,039,763	1,703,944	431,050	141,135	..	..
1875	54,401,540	3,398,155	629,634	231,458	..	..
1880	66,860,150	3,169,300	2,907,934	906,228	..	..
1885	86,507,431	3,205,275	2,158,604	513,937	296,473	373,857
1890	102,817,077	4,150,599	4,327,753	1,030,415	898,894	1,087,617
1895	116,015,170	3,662,131	1,011,052	215,971	1,134,097	1,262,711
1900	140,706,486	4,749,196	4,485,155	1,034,014	1,844,831	2,123,881
1905	139,912,737	5,381,333	1,149,368	294,574	1,690,684	2,694,432
1910	204,368,957	8,308,410	1,097,952	319,073	2,654,196	3,850,777
1911	169,424,811	6,491,707	1,033,170	330,186	2,250,565	3,503,406
1912	188,361,790	7,105,483	2,348,675	741,600	2,573,238	3,909,569
1913	186,533,036	8,057,620	341,981	131,938	2,578,693	4,449,933
1914	220,472,898	9,318,114	750,904	270,011	3,229,969	5,863,062
1915	196,570,114	10,387,875	405,865	215,463	3,591,260	7,794,395
1916	185,506,859	12,386,074	180,586	86,985	3,326,045	7,271,318
1917	178,274,486	12,175,366	71,048	74,606	2,446,945	5,982,404
1918	108,724,575	7,527,266	56,819	73,088	2,036,904	4,957,576
1919	274,246,613	19,559,537	313,823	355,007	3,822,683	9,628,292

Exports (the Produce of New Zealand)—*continued.*

Year.	Butter.		Cheese.		Phormium Fibre.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Cwt.	£	Cwt.	£	Tons.	£
1855	785	5,786	406	2,163	150	4,674
1860	1,026	6,623	810	3,535	61	1,240
1865	*	*	*	*	3	75
1870	3,435	12,995	2,735	9,327	5,471	132,578
1875	104	660	442	1,862	639	11,742
1880	2,717	8,350	717	1,983	894	15,617
1885	24,923	102,387	15,245	35,742	1,063	16,316
1890	34,816	122,701	40,451	84,986	21,158	381,789
1895	57,964	227,601	76,743	150,909	1,806	21,040
1900	172,583	740,620	102,849	229,111	15,906	332,182
1905	305,722	1,408,557	88,562	205,171	27,877	696,467
1910	356,535	1,811,975	451,915	1,195,373	20,645	448,414
1911	302,387	1,576,917	439,174	1,192,057	17,366	300,209
1912	378,117	2,088,809	577,070	1,680,393	18,641	376,264
1913	372,258	2,061,651	611,663	1,770,297	28,092	721,924
1914	434,067	2,338,576	863,776	2,564,125	19,702	455,214
1915	420,144	2,760,625	817,258	2,730,211	23,220	571,621
1916	358,632	2,632,293	949,416	3,514,310	27,674	1,001,725
1917	254,397	2,031,551	885,743	3,949,251	23,516	1,197,396
1918	431,023	3,402,223	883,430	4,087,278	25,167	1,387,763
1919	345,818	3,080,128	1,572,311	7,790,990	22,347	866,930

* Not available.

III.—TRADE—*continued.*

Year.	Exports (the Produce of New Zealand—*continued.* Gold. Quantity.	Gold. Value.	Gum (Kauri). Quantity.	Gum (Kauri). Value.	Provisions, Tallow, Timber, &c. Value.	Total New Zealand Produce exported.
	Oz.	£	Tons.	£	£	£
1855	..	..	355	4,514	173,324	365,867
1860	4,538	17,585	1,046	9,851	52,795	549,133
1865	574,574	2,226,474	1,867	46,060	82,729	3,503,421
1870	544,880	2,157,585	4,391	175,074	212,044	4,544,682
1875	355,322	1,407,770	3,230	138,523	285,674	5,475,844
1880	303,215	1,220,263	4,725	242,817	537,742	6,102,300
1885	222,732	890,056	5,876	299,762	1,154,579	6,591,911
1890	187,641	751,360	7,438	378,563	1,440,731	9,428,761
1895	293,493	1,162,181	7,425	418,766	1,268,843	8,390,153
1900	373,614	1,439,602	10,159	622,293	1,784,350	13,055,249
1905	520,485	2,093,936	10,883	561,444	2,167,616	15,503,530
1910	478,286	1,896,318	8,693	465,044	3,648,779	21,944,163
1911	454,837	1,815,251	7,587	395,707	3,176,458	18,781,898
1912	343,163	1,345,131	7,908	401,305	3,623,851	21,272,405
1913	376,161	1,459,499	8,780	549,106	3,375,922	22,577,890
1914	227,954	895,367	8,473	497,444	3,782,804	25,984,717
1915	422,825	1,694,553	4,575	279,133	4,668,986	31,042,862
1916	292,620	1,199,212	5,456	339,882	4,544,108	32,975,907
1917	218,624	903,888	4,594	291,917	4,481,578	31,087,957
1918	11,987	42,391	2,419	157,313	6,302,112	27,937,010
1919	320,210	1,334,405	4,128	255,812	10,433,283	53,304,384

Year.	Total Exports.	Imports. Total.	From United Kingdom.	From Australia.	From United States.	Total Trade.
	£	£	£	£	£	£
1855	365,868	813,460	328,909	..	..	1,179,328
1860	588,953	1,548,333	870,569	649,473	18,474	2,137,286
1865	3,401,667	5,594,977	2,606,994	2,565,285	45,084	8,996,644
1870	4,822,756	4,639,015	2,685,736	1,655,086	60,497	9,461,771
1875	5,828,627	8,029,172	5,103,610	2,355,988	213,492	13,857,799
1880	6,352,692	6,162,011	3,479,217	1,930,408	238,011	12,514,703
1885	6,819,939	7,479,921	5,227,551	1,254,908	401,532	14,299,860
1890	9,811,720	6,260,525	4,221,270	1,087,593	355,395	16,072,245
1895	8,550,224	6,400,129	3,992,359	1,261,125	394,233	14,950,353
1900	13,246,161	10,646,096	6,504,484	1,776,978	1,061,873	23,892,257
1905	15,655,947	12,828,857	7,795,284	1,815,717	1,438,501	28,484,804
1910	22,180,209	17,051,583	10,498,771	2,359,393	1,399,737	39,231,792
1911	19,028,490	19,545,879	11,787,300	2,944,991	1,682,129	38,574,369
1912	21,770,581	20,976,574	12,499,787	2,583,887	2,048,618	42,747,155
1913	22,986,722	22,288,302	13,312,193	2,914,848	2,107,990	45,275,024
1914	26,261,447	21,856,095	11,985,946	3,376,371	2,282,966	48,117,542
1915	31,748,912	21,728,834	11,141,067	3,554,535	2,600,248	53,477,746
1916	33,286,937	26,339,283	13,869,455	4,002,171	3,969,925	59,626,220
1917	31,587,547	20,919,265	8,817,519	3,660,931	3,900,658	51,602,418
1918	28,516,188	24,234,007	8,977,725	5,133,349	4,980,748	52,707,441
1919	53,970,075	30,671,698	11,839,430	5,081,968	7,576,314	84,641,773

IV.—Transport and Communication.

Year.	Oversea Shipping.				
	Inwards.		Outwards.		Registered Vessels belonging to New Zealand.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Gross Tonnage.
1855 ..	378	88,614	341	79,825	..
1860 ..	398	140,276	398	140,293	8,527
1865 ..	862	295,625	783	283,020	24,484
1870 ..	756	273,151	766	265,407	26,743
1875 ..	926	416,727	940	417,820	42,025
1880 ..	730	395,675	786	424,041	66,316
1885 ..	786	519,700	780	513,000	95,887
1890 ..	744	662,769	745	649,705	98,907
1895 ..	611	672,951	597	648,946	100,988
1900 ..	616	854,632	613	825,275	137,767
1905 ..	627	1,139,410	627	1,141,552	170,957
1910 ..	609	1,389,031	588	1,367,207	233,531
1911 ..	621	1,482,378	624	1,467,402	234,084
1912 ..	677	1,672,092	666	1,668,630	245,445
1913 ..	645	1,738,985	635	1,699,807	254,117
1914 ..	646	1,724,849	657	1,781,981	168,552
1915 ..	638	1,641,425	649	1,635,933	150,095
1916 ..	574	1,448,517	590	1,491,593	148,497
1917 ..	543	1,405,776	547	1,381,882	140,039
1918 ..	543	1,279,548	544	1,310,627	141,751
1919 ..	564	1,480,883	574	1,505,256	140,615

Year.	Government Railways. (Figures to 31st March following.)			Electric Telegraph. (From 1895, figures for 31st March following.)		
	Miles open for Traffic.	Miles under Construction.	Railway Receipts.	Miles of Line.	Number of Messages.	Cash and Cash Values, including Telephones.
			£			£
1870 ..	..	..	..	1,887	238,195	27,422
1875 ..	542	464	72,073	3,156	993,323	74,420
1880 ..	1,288	192	836,077	3,758	1,304,712	100,023
1885 ..	1,613	179	1,047,418	4,463	1,774,273	112,778
1890 ..	1,842	132	1,121,701	5,060	1,961,161	110,697
1895 ..	2,014	114	1,183,041	6,245	2,124,211	148,955
1900 ..	2,212	208	1,727,236	7,249	3,898,128	222,305
1905 ..	2,407	222	2,349,704	8,355	5,640,219	298,079
1910 ..	2,753	192	3,494,182	11,316	8,360,647	438,989
1911 ..	2,798	205	3,676,509	11,805	9,063,133	479,289
1912 ..	2,851	192	3,971,002	12,508	9,944,272	528,119
1913 ..	2,854	223	4,043,328	13,044	10,694,032	579,816
1914 ..	2,945	211	4,105,457	13,434	10,827,968	665,938
1915 ..	2,970	243	4,548,356	13,684	10,836,751	846,259
1916 ..	2,970	243	4,800,810	13,896	10,875,120	855,298
1917 ..	2,983	231	4,687,700	13,687	11,624,720	868,182
1918 ..	2,983	250	4,988,632	13,813	12,091,017	993,991
1919 ..	2,996	261	5,752,487	13,722	15,074,067	1,044,336

V.—Finance.

Year.	Revenue of General Government.*	Expenditure of General Government.*		Public Debt: Debentures and Stock in Circulation.	Debt of Local Bodies, Year ended 31st March following.
		Out of Revenue Account.	Out of Loan Accounts.†		
	£	£	£	£	£
1870	..	..	..	7,841,891	..
1875	..	..	..	17,400,031	..
1880	..	..	..	28,185,711	3,039,807
1885	..	..	..	33,880,722	4,943,270
1890	..	..	..	38,830,350	6,042,693
1895	4,556,015	4,370,481	..	43,050,780	6,737,578
1900	5,854,116	5,479,704	1,746,141	49,591,245	7,563,069
1905	7,585,098	7,122,340	2,972,589	62,191,040	10,718,051
1910	10,297,273	9,343,106	3,359,311	81,078,122	15,727,613
1911	11,061,161	10,340,368	4,114,539	84,353,913	16,590,877
1912	11,734,271	11,082,038	4,097,160	90,060,763	17,483,332
1913	12,229,661	11,825,864	4,240,896	99,730,427	18,923,482
1914	12,451,945	12,379,803	6,059,983	100,059,910	19,454,475
1915	14,507,530	12,493,107	9,459,071	109,637,397	20,754,168
1916	18,355,194	14,058,770	17,509,017	129,836,105	21,432,767
1917	20,206,222	15,120,288	19,726,163	150,840,055	22,260,537
1918	22,352,372	18,673,599	25,075,656	176,076,260	22,673,712
1919	26,081,340	23,781,924	30,332,224	201,170,755	..

Year.	Banks of Issue. (Average of Four Quarters.)			Savings-banks (Post Office and Private).		Post Office Money-orders issued.	
	Deposits.	Assets.	Liabilities.	Number of Depositors.	Balance to Credit at End of Year.	Number.	Amount.
	£	£	£		£		£
1860	644,521	992,082	801,588	1,104	12,450	..	..
1865	2,638,414	5,455,289	3,522,146	4,304	87,400	17,236	78,576
1870	3,127,769	6,315,354	3,819,670	12,137	388,804	31,864	140,454
1875	5,967,205	10,987,178	6,987,318	30,310	897,326	73,027	293,481
1880	8,538,935	14,220,275	9,550,177	47,462	1,148,992	135,648	465,405
1885	10,083,296	18,811,567	11,130,244	85,769	2,142,560	188,622	581,395
1890	12,368,610	17,735,259	13,356,598	118,344	3,137,023	176,427	602,077
1895	13,544,415	18,159,781	14,491,627	163,513	4,620,696	243,497	812,604
1900	15,570,610	17,314,535	16,964,582	228,883	6,665,344	369,834	1,214,853
1905	20,545,601	21,770,525	22,144,166	316,376	9,773,954	417,441	1,541,712
1910	24,968,761	26,398,927	26,742,081	432,119	15,620,515	569,657	2,457,523
1911	26,765,122	29,433,614	28,625,803	459,602	17,194,461	607,764	2,759,393
1912	25,622,083	31,196,400	27,508,348	503,927	18,043,540	666,425	3,231,350
1913	25,733,187	30,708,932	27,591,099	532,682	18,923,522	690,745	3,357,774
1914	27,640,507	32,502,312	29,808,349	559,203	20,924,754	691,518	3,427,505
1915	31,433,653	33,209,483	34,448,270	587,109	24,238,966	664,860	3,471,818
1916	37,757,917	37,015,486	41,977,619	619,972	28,015,674	669,355	3,607,087
1917	42,930,713	44,979,616	48,541,961	651,532	31,917,099	642,683	3,476,646
1918	45,562,939	48,570,126	52,048,732	679,398	36,529,654	638,500	3,649,371
1919	50,489,444	48,615,209	57,861,393	726,255	41,951,026	690,291	4,604,059

* Financial year ended 31st March of year following. † Calendar years prior to 1880; after 1880, for year ended 31st March of year following.

V.—FINANCE—*continued.*

Year.	Insurances in Force in the Government Life Insurance Department at End of Year.		Old-age Pensions, 31st March of following Year.		Friendly Societies from which Returns received.		Public Trust Office.	
	Number of Policies.	Sums Assured and Bonuses.	Number of Pensions in Force.	Amount represented.	Number of Lodges, &c.	Number of Members.	Number of Estates.*	Value of Estates.*
		£		£				£
1870	59	30,250	..	..	..	..	..	..
1875	4,989	1,836,859	..	..	..	..	347	42,163
1880	11,656	4,171,504	..	..	179	14,484	770	117,980
1885	23,218	6,552,242	..	..	302	22,794	1,190	457,620
1890	28,102	7,807,792	..	..	357	26,379	1,678	1,240,097
1895	33,968	9,345,229	..	..	376	30,905	2,236	1,806,953
1900	40,368	10,639,978	12,405	211,965	443	40,257	2,898	2,326,954
1905	45,137	11,725,977	12,582	313,018	501	51,103	3,977	4,009,992
1910	48,932	12,586,798	16,020	403,020	609	68,006	5,966	5,477,675
1911	49,376	12,683,277	16,649	416,530	658	71,771	6,456	5,951,233
1912	50,458	13,271,699	16,509	412,408	664	73,243	7,225	6,782,532
1913	51,343	13,539,467	18,050	447,765	681	73,691	7,538	7,288,447
1914	52,273	13,797,075	19,352	475,970	717	74,074	8,026	7,942,158
1915	52,950	14,220,945	19,804	484,232	728	73,027	8,734	8,217,500
1916	53,208	14,259,372	19,697	480,559	727	70,360	†	†
1917	53,058	14,188,774	19,960	740,849	730	68,771	13,746	10,358,685
1918	53,803	14,770,543	19,872	731,910	731	67,527	15,223	12,807,214
1919	55,770	15,546,744	19,993	731,735	735	70,598	14,679	14,330,980

* From 1895 on the figures are for year ended 31st March following. † Information not available.

VI.—EDUCATION.

Year.	Scholars at Primary Schools.*	Scholars at Secondary or High Schools.†	Scholars at Private Schools.	New Zealand University Graduates (Direct Degrees).
1875	45,562	..	7,316	..
1880	82,401	1,631	11,238	..
1885	102,407	2,659	11,989	103
1890	117,912	2,117	13,626	230
1895	129,856	2,525	14,659	464
1900	130,724	2,792	15,555	699
1905	137,623	4,060	16,639	992
1910	156,324	7,970	18,981	1,424
1911	161,648	6,806	19,868	1,515
1912	166,264	7,357	20,238	1,631
1913	172,168	7,815	21,115	1,758
1914	178,509	8,257	22,080	1,880
1915	183,214	8,860	22,339	2,002
1916	185,884	9,623	23,412	2,108
1917	190,354	10,517	25,491	2,226
1918	194,934	11,796	26,237	2,317
1919	196,059	12,680	20,977‡	2,473

* Excluding children attending Native schools and industrial schools. † Including in later years secondary pupils attending technical high schools (2,926 in 1919), but excluding secondary departments of district high schools. ‡ Registered schools only.

APPENDICES.

(*a.*) PRINCIPAL EVENTS.

[NOTE.—Dates of principal events prior to August, 1914, are given in issues of the Year-book for 1915 and previous years.]

1914.	Aug. 5.	His Excellency the Governor publicly notified that war had been declared between Great Britain and Germany.
	Aug. 15.	New Zealand Advance Expeditionary Force left Wellington.
	Aug. 29.	New Zealand Advance Expeditionary Force landed at Apia, Samoa, unopposed.
	Sept. 12.	Huntly coal-mine explosion whereby 43 lives were lost.
	Oct. 16.	New Zealand Main Expeditionary Force left Wellington.
1915.	April 25.	Australian and New Zealand Infantry effected a landing on Gallipoli.
	Aug. 12.	National Cabinet formed.
	Dec. 19.	Australian and New Zealand troops evacuated Gallipoli.
1916.	April —.	New Zealand Division transferred to Western front.
	Aug. 1.	Military Service Act passed providing for compulsory enrolment of men for war service.
	Sept. 15.	New Zealand Division distinguished itself at Flers.
	Oct. 15.	Census of New Zealand taken.
	Nov. 16.	First ballot under Military Service Act.
1917.	June 7.	Messines Village captured by New Zealand troops.
	June 28.	Earl of Liverpool sworn in as first Governor-General of New Zealand.
	Oct. 4–12.	New Zealand Division took prominent part in operations north-east of Ypres.
1918.	June 26.	Huddart-Parker's s.s. "Wimmera" sunk off North Cape by hostile mine.
	July 20.	Otira Tunnel pierced.
	Aug. 21.–Nov 11.	New Zealand Division took a meritorious part in the final British offensive.
	Sept. 19.	Turks heavily defeated in Palestine.
	Sept. 29.	Bulgarian surrender signed.
	Oct. 30.	Turkish armistice signed.
	Nov. 2.	Austrian armistice signed.
	Nov. 11.	Armistice signed by German High Command.
	Nov. 21.	German Fleet surrendered.
	Nov.–Dec.	Influenza epidemic prevalent throughout the Dominion.
1919.	Jan. —.	Visit of French Mission under General Pau.
	April 10.	Special licensing poll taken.
	Aug. 20.	H.M.S. "New Zealand" arrived at Wellington on her second visit to the Dominion, bringing Admiral of the Fleet Viscount Jellicoe of Scapa, G.C.B., O.M., G.C.V.O.
	Aug. 21.	Dissolution of National Ministry.
	Oct. 2.	Women's Parliamentary Rights Bill passed its second reading in the Legislative Council.
	Dec. 17.	General elections.
1920.	Jan. 10.	Official date of termination of war with Germany.
	April 24–May 22.	Visit to New Zealand of His Royal Highness the Prince of Wales.
	April 28.	Commencement of railway strike.
	Aug. 25.	First aeroplane flight across Cook Strait.
	Sept. 27.	Admiral of the Fleet Viscount Jellicoe of Scapa, G.C.B., O.M., G.C.V.O., sworn in as Governor-General.
1921.	April 17.	Census of New Zealand.

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